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# Possibilities of Merchandising American Rayon Yarns And Fabrics in Foreign Countries

## *Outline of Competition to Be Met and Methods Which Should Be Employed*

**Exports of American rayon have been negligible to date. This has been due largely to the fact that domestic users have absorbed all the output of our rayon producers. The thought has been expressed in these columns, however, that the basis should be laid for expansion of our market to foreign fields in order to meet situations which may arise in the future. This thought is shared by the author of the accompanying article who outlines the possibilities in the various foreign countries. His treatment of the market for rayon fabrics is of even more immediate interest.**

IN view of the rapidly increasing capacity of the rayon plants in the various producing countries, it is inevitable that sooner or later the question of the marketing of these goods abroad will assume greater importance than it has today. In Europe, the matter is probably much further advanced than in the United States where the potentialities of the home market are so vast as to engage the full attention both of yarn producers and of fabric manufacturers. *It is, however, a matter which requires more than casual thought, for the European countries are in the meanwhile establishing themselves in the foreign markets and when the time comes for the United States to sell her wares abroad in greater quantities, she may well find that many of the markets, if not closed altogether, are at least rendered more difficult of entry.*

Writing as an outsider one is forced to mention in the first place the great advantages possessed by American manufacturers in the development of foreign markets in rayon and rayon mixtures. In the first place, it is recognized abroad that the United States has an undoubted advantage in the fact that it controls to a very large extent the "movie" trade of the world. The influence of the cinema is greatest in fashion goods and it is known from experience that the United States has directed attention to its goods through the influence of Hollywood. It is impossible to judge exactly but it would be highly interesting to outsiders to know to what extent the United States motor car industry has been assisted by the fact that the cinema patrons of the world rarely see any but American cars. In England, merchants of textile goods are conscious of the fact that American designs are becoming more and more popular and that when the Oriental or the native population of any part of the world begins to adopt civilized dress, they almost unconsciously take to what we term "American designs." It would, again, be interesting to know to what extent this is due to the influence of the cinema. The best answer is to be found in the fact that European nations are now realizing that a national film industry is an absolute essential.

It is perhaps not fully realized that the most common American goods which are used in foreign countries are those which are most directly in the public eye. I have mentioned the cinema and the motor car. I might add the wireless, the electric lamps, the phonograph, etc., and in countless other ways American goods and influences are spreading throughout the world. These then provide the rayon export merchant with a free gift of immense importance in introducing his goods.

On the economic side, there is no doubt that the changed conditions of the monetary world since the war, in which the United States is now lending money in all direction is a great help to the development of foreign trade. Particularly is this noticeable in South America.

### South and Central America

Turning now to matters more directly connected with the trade, we face the question of the actual marketing of rayon goods abroad. Naturally development first takes place in the direction of South and Central America, countries where the influence of the United States is greatest and where large amounts of capital have been invested.

In a short summary such as this it is impossible to deal with the various markets provided but in the main it will be found that quality counts more than in certain Asiatic markets to which I will afterwards refer. This factor gives a nation such as Great Britain or the United States a distinct advantage and an examination of conditions in the rayon market in, for instance, the Argentine, will immediately reveal the fact that certain foreign competitors, who have rightly or wrongly earned a reputation for sending poor quality goods, have been almost turned away. The markets of South America are therefore the most favorable for active development on the part of rayon manufacturers in the United States and should be carefully analyzed.

The mistake of uncoordinated effort should not be made. It is probably impossible for the manufacturer to sell direct in the countries concerned and on the other hand if the matter is left in the hands of individual firms of export merchants, it will be found

### Imports of Rayon into British India

YARNS

| Period 1927 | Britain lbs. | Italy lbs. | Others lbs. | Total lbs. |
|---|---|---|---|---|
| July-Sept. | 596,000 | 544,000 | 307,000 | 1,447,000 |
| Apr.-June | 640,000 | 1,475,000 | 532,000 | 2,647,000 |
| Jan.-March | 324,000 | 1,812,000 | 473,000 | 2,609,000 |

### Cotton and Rayon Mixture Piece Goods

| From | April-Sept. 1927 yds. | Sept.-April 1926/7 yds. | April-Sept. 1926 yds. |
|---|---|---|---|
| Britain | 5,715,000 | 8,105,000 | 7,874,000 |
| Italy | 5,300,000 | 7,895,000 | 6,006,000 |
| Switzerland | 4,025,000 | 3,732,000 | 2,966,000 |
| Germany | 2,112,000 | 1,331,000 | 1,157,000 |
| Others | 2,104,000 | 1,952,000 | 960,000 |
| Total | 19,256,000 | 23,015,000 | 18,963,000 |

that these concerns are competing against each other just as much as they are competing against their European rivals. Combination in merchanting is therefore essential to avoid loss due to uneconomic competition. The markets will not be obtained without a struggle and it will require all the resources of the textile industry to develop a large trade in a country where British and other European goods have for generations been regarded most favorably. The immense potentialities of the various countries however render any effort fully worth while.

Turning to the Asiatic markets, I cannot hold out any great hope that United States rayon manufacturers will succeed to a marked degree.

To the American, the gradual way in which certain other European countries have encroached on the great British textile trade must have been rather a matter of surprise. Speaking of rayon yarns and manufactures however, it will perhaps be a greater surprise to some readers to know how skilfully Britain has managed the trade since the war. It will be recollected that in the rayon trade, up till a few years ago, Britain had almost a monopoly in the case of India and China. Then apparently Italy and other countries forged ahead. To put the matter briefly, this advantage was gained at a very great cost. Not only were prices cut but extended credit was given and the drain on the capital resources of the producing companies and of the merchant houses was very great.

During the whole of this period, the British manufacturers were really husbanding their resources. It was obvious that Britain's competitors were out to get a footing in the market at any cost, a course which was only justifiable if the business was likely to be permanent. However it was not clearly foreseen by these people that all this time Japan was gathering strength and that particularly in China and indeed throughout the East, it was only a matter of a few years until the market would be in a great measure transferred to the Japanese. Britain, on the other hand, held aloof from the cut-throat competition, and concentrated on the better class materials in which neither European nor Japanese competition was truly effective.

The inevitable happened and the European competitors soon found that they were jeopardizing themselves. The result was that some of them came to England for financial assistance and got it at a price which gave Britain a greater measure of control over the industry than she had ever had before. Today we see prices being gradually raised by continental firms and on the other hand, gradually lowered by Britain. As a result of this the British influence is once more being regained and without loss of capital resources.

Into this world of competition, the United States merchants would have to enter. They would have Britain with her quality goods and her reputation together with Germany, Italy, Belgium, Switzerland and Holland all against them. In addition the growing menace of the Japanese rayon industry would be another factor in the situation and furthermore the Bombay and the Chinese mills are gradually using more and more rayon.

Details of the Indian import trade are given in table on preceding page.

It will be found that in countless cases the tariff barriers to trade in rayon fabrics are almost insuperable. In a vast majority of cases, owing to the unfortunate use of the term "artificial silk," rayon is classified as real silk and charged accordingly. In addition it is often taxed as a luxury.

The development of the rayon export trade by a country such as the United States is attended with great difficulties arising from low labor costs in other countries. It is however satisfactory to feel that the standard which has been set up by both the United States and Britain in regard to conditions and payment of labor are slowly and inevitably being adopted by other nations. It is unlikely that conditions both in this respect and in regard to unfair exchange difficulties will ever be worse than they have been in the past few years and as a consequence growth of the export trade may be hopefully looked for.

# S. T. A. Master Mechanics Meet

## *Charlotte Sessions Devoted Largely to Power Transmission Discussion*

THE meeting in Charlotte, N. C., at the Southern Manufacturers' Club on May 9, the Master Mechanics' Section of the Southern Textile Association devoted the major portion of both its morning and afternoon sessions to discussing problems relating to power transmission equipment in textile mills. Chairman H. H. Iler of Newberry, S. C., was prevented from attending the meeting, and Vice Chairman G. T. King, Lancaster, S. C., presided in his absence.

Questions for discussion had been prepared in advance by Chairman Iler and mailed to members. The first question on the list was whether transmission ropes should be put on tight or slack. W. G. Gregory, chief engineer and master mechanic of F. W. Poe Mfg. Co., Greenville, S. C., recommended putting ropes on tightly at first and letting them stretch in use because the slack in the rope increased the arc of contact and improved the efficiency of the drive. Fred Tindall, master mechanic of Inman (S. C.) Mills, asked for a method which would overcome failure of transmission rope to roll in the groove. Mr. Gregory suggested twisting the rope thoroughly to cure this. Dressing for transmission ropes was discussed. Tallow and fish oil were suggested, the former being especially good to stop "loping." Better service was reported from spliced rope, as a rule, where the distance between centers was long, but coupled rope was well spoken of for short center drives where the coupling made it easier to twist the rope when it slackened. Transmission rope impregnated with graphite was said to be objectionable because it stretched too much and finally became too small to give good contact in the grooves.

### Speed of Shafting

Speeds for line shafting in textile mills were discussed next. W. J. Donaho, engineer, Carolina Cotton & Woolen Mills, Spray, N. C., said that 300 rpm. was a good speed for average conditions. L. M. Kincaid, master mechanic, National Weaving Co., Belmont, N. C., said he did not think a standard speed could be set up as it would have to be left to individual mills to determine according to type of pulleys, bearings, etc. W. G. Young, master mechanic, Kendall Mills, Inc., Paw Creek, N. C., mentioned instances where ceiling height limited the size of the pulleys and necessitated higher speeds. He thought 280 to 300 rpm. fast enough and pointed out that lower speeds reduced supply bills. Vice Chairman King agreed with Mr. Young and mentioned an instance where a pulley, making 590 rpm., and driving two frames from below the floor, had set up excessive vibration with attendant wear.

The causes of breaks in shafting were discussed and several members gave instances of breaks which had come under their observation. Badly aligned shafting was cited as probably the principal cause of breaks. It was pointed out that where breaks were due to crystalization the broken surface would be smooth, but when due to overloading the surfaces would be rough or lipped.

At the request of the vice chairman, Secretary Gregg of the Southern Textile Association read a letter from the master mechanic of a mill describing the breaking of a connecting rod on a steam engine. The name of the mill, make of engine, and other identifying details were suppressed. Members then proceeded to discuss probable causes of the break based on the data given. It was recommended that steam engines be checked at least once a month for alignment and worn parts replaced to prevent danger of shafts breaking.

### Couplings and Pulleys

Shaft couplings of the flange and compression types were then discussed. Compression couplings were well spoken of for small shafts on light drives, and the preference for keyed couplings on hard drives seemed fairly well established, though a member remarked that if shafting was properly aligned then any type of coupling would give service.

Steel pulleys vs. cast iron pulleys, the relative merits of which were asked in one of the questions, provoked a long argument. M. J. Mitchell, Mollohon Cotton Mills, Newberry, S. C., said that steel pulleys were much easier to change than cast iron. Mr. Young of Kendall Mills told of driving 586 looms satisfactorily with split steel pulleys and finding no difficulty in keeping them tight. Vice Chairman King suggested that master mechanics who wanted steel pulleys to do a specific job could get them by explaining to the manufacturers what it was they wanted the steel pulley to do. A member who said his speeds were carefully checked had never noted any excess belt slippage on steel pulleys. There were strong advocates of cast iron pulleys among those members who stated their views on the relative merits of the two types, though it was remarked that no one could afford to overlook the fact that steel pulleys had in their favor their lightness which gave much less dead load on the shafting.

### Crossed Belts

"Are crossed belts undesirable?" was another of Chairman Iler's questions which provoked warm discussion. The consensus of opinion appeared to be that crossing belts was poor practice on short center drives or where there was great difference in size of pulleys, both short centers and disparity in size of pulleys having a tendency to throw the crossed place in the belt so close that excessive friction would set up. Vice Chairman King said he would use a crossed belt in preference to an open one on drives where the belt would get very dirty, provided pulleys were reasonably large and reasonably far apart, because the friction due to the crossing would be negligible but probably sufficient to keep the belt clean.

Whether it is better to lay out shafting, one line for each row of machines, or one line centered on the alley for every two lines of machines, left little room for argument as opinions seemed to agree that shafting should be centered over alleys and two rows of machines driven from each line of shafting. Indeed, a member said that using one line of shafting for each row of machines could only be justified by necessity, such as in cases where ceiling heights were so low that the belts would cross and leave insufficient headroom for the help walking in the alley.

Under-floor drives were condemned because they were usually short and speeds would not hold up unless belts were constantly tightened. The tight belts caused the bushings on the loose pulleys to cut through quickly and also the life of the belts were shortened unduly.

A type of fastener in which the plates are held together by copper rivets was recommended by a member as best for belts on four-frame drives, both as to holding quality and

freedom from danger to operatives. It was also recommended that the manufacturers of leather belts be asked to stretch them when desirable, rather than for the master mechanic to undertake to do it by the usual method of clamping the ends and then stretching with block and tackle.

### Steam Plant Operation

At this point, Charles A. Spencer, plant engineer for the Union Bleachery, Greenville, S. C., asked for information on a certain type of stoker with ash grinder attached. His question on steam plant operation led to animated discussion as has been the case at previous meetings of the master mechanics' section when steam plant problems came up. Mr. Spencer described by request his method of hand firing the boilers in his plant, and took occasion to condemn shallow settings as a cause of excessive fuel consumption. W. B. Given, boiler inspector for the Maryland Casualty Co., suggested heating boiler feed water above the boiling point to eliminate excess oxygen in the water that would cause boiler tubes to pit.

Steam plant operation was discussed again after the noon lunch. Members gave their experience with furnace walls constructed of fire clay, fire brick, high temperature cement, and a one-piece patented furnace lining made from plastic material. Mr. Young gave his experience with fire brick costing as high as $109 a thousand and said that he had gotten better results from the one-piece lining of plastic material in his hand-fired boilers operated without induced draft, though the first cost of the plastic material and its installation cost were higher than corresponding costs for brick.

The operation of textile motors came in for a short discussion just before adjournment. "What voltage would you recommend for operating motors directly connected to looms or other machines?" was the last question discussed. A member suggested that not over 220 volts should be used if the motors were on the floor else the machine operators would very likely get severe shocks. Other members told of using 550 volts.

### Next Meeting on Repairs

Vice Chairman King announced that at the next meeting the chief subject of discussion would be repair practice in mills. He said that it would be desirable for all master mechanics to investigate and be able to report at the coming meeting on what degree of wear was allowable in specific machine parts before a new part was necessary. He said that through investigation of this matter it might be possible for master mechanics to save their mills large sums in repair parts. He remarked that merely because a machine part was worn was not in itself sufficient reason for junking it and putting in a new part and that the worn part should be actually causing or likely to cause bad work, endanger operatives, etc., before there was a solid reason for replacing it with a new one.

# Airplanes and Textiles

## *Possibilities of Solving Distributors' Problems by Means of the Air*

*By J. E. Bullard*

THERE are certain problems in the textile industry which the airplane promises to solve. The plane itself is not likely to furnish as great a demand for textile material as it would seem at first sight. When planes come to be produced in quantity, when the same methods of mass production are applied to them as have been applied to automobiles it is more than likely that planes so made will be all metal. Much research work is now being done with a view to discovering still more satisfactory light-weight alloys than are now on the market. In some respects an all-metal plane will be safest and it is probable that it will prove the cheapest to build because it will lend itself more readily to production by means of automatic machinery.

**The accompanying description of possible merchandising developments may be regarded as visionary and idealistic by the hard-headed practical business man. Nevertheless it is dangerous to predict such an evolution cannot take place and who is there to say it may not come to pass much sooner than the majority of us dream?**

**Therefore it is with the thought in mind that the solution of many current distributing and manufacturing problems may be solved by means of developments in air transportation whose possibilities are but beginning to be appreciated, we give space to this inspirational article which to many may appear fantastic and an unrealizable dream.—*Editor.***

However, there are certain problems which have arisen in the textile industry that a fully developed air transportation in this country will help greatly to solve. Since the war retailers have concentrated their attention to a degree unequalled before upon increasing the rate of turnover. They have stopped giving the advance orders that once were customary. Wholesalers and jobbers also have been forced to watch their stocks more closely, buy at shorter intervals and give fewer large advance orders than before.

In addition to this there is a growing demand for something new. Retailers are more interested if they can get something new in designs and patterns and perhaps in materials as well. Work on many textiles cannot be planned as far ahead as was formerly the case and many products cannot be made up in advance and held in the warehouse with any assurance that they may be sold in the future at a profit. With the former means of transportation and communication this proves a serious problem.

Samples have to be gotten out and distributed before orders are taken and this is a slow process. It takes time for the salesmen to get around and gain some idea of just how much can be sold. There is only one way that the manufacturer can meet the changing conditions effectively and that is by using a much faster means of transportation.

### Transportation a Factor

Now with air lines fully developed and perhaps with the manufacturer owning planes himself, note the difference. On the day the samples are ready they are shipped by plane to the different parts of the country. Some if not all of the salesmen can take off right from the mill by plane for their various territories. Within two or three days it is possible to cover the entire country, secure as many orders as possible and put that particular kind of goods into production. While that is being produced something new may be developed and offered to the customers of the mill. By using the air to get to places and the telegraph and telephone for communication work that may now take weeks if not months can be completed in days.

It is obvious that this makes it possible for the mill to apply to its business much the same principles of the turnover of stock the retailer applies to his. Small quantities of goods and re-orders can, when speed is sufficiently essential, be shipped by airplane. There is reason to believe that with increased patronage air lines can reduce their rates to a point where much more can be shipped economically by air than is the case at the present time.

### Effect on Seasonable Goods

Another way in which the airplane is bound to aid the textile industry is in the direction of seasonable goods. Textiles follow seasons for the simple reason that people remain in certain places pretty much the year round. For example, if the people in the North were constantly going south and those in the South going north, if there was enough travel so that a very large proportion of the people would need at all times of the year clothing suitable for any climate, then there would not be such seasonable demands as are experienced at the present time.

People in New England who spent their week ends in Florida would have to have summer as well as winter garments. Those in Florida who made frequent winter trips to New England would have to be fully equipped also. If in summer people could travel easily and quickly up toward the polar regions where the temperatures are low and winter sports could be participated in, winter textiles would be needed in summer by such people living in New England.

The reason why more people do not traverse these distances oftener is largely because of the time it takes. Not such a very large percentage of the people in New England can spare the time to make trips to Florida during the winter. It is often a matter of time rather than of money.

Now what is going to happen when there are air lines from Boston to Palm Beach or some other Florida resorts which run special week end excursions, leaving Boston Friday night and returning Monday morning before business houses open and giving people two full days in Florida? It is almost positively certain that such lines will be established and such excursions run. It is also certain that they will lead a large number of people to make these week end trips.

These people have to buy apparel they otherwise would not be at all likely to buy at that time of the year because it is out of season in Boston. In other words all four seasons of the year are going to exist for an increasing number of people for the full year just as soon as air transportation reaches a point where lines cater expressly to passenger service and run excursions and special trips that they believe will prove especially attractive to possible patrons.

### An All-Year Production

Under these conditions it surely is going to be increasingly more practical to keep what are now seasonable goods in production the year round. In other words, the rate of production can be fixed so that the mill operates on these goods at the same or nearly the same capacity constantly. All goods can be placed in the hands of the consumer more quickly, there will be less accumulation of goods in stock at any time of the year and to the degree that air traffic is used for moving goods the quantity in transit will be reduced.

It is not such a difficult matter to figure possible savings in these various directions. Present day business demands a much quicker movement of goods from the producer to the consumer than has been necessary at any time in the past. Goods in storage, even goods in transit are more or less of a liability until they are actually turned into cash.

### Transportion Kept Liquid

Back in 1920 when the textile industry was oversold and the transportation system had been so completely broken down that one never could tell when goods would move, the railroads finally got things to moving in something like a normal manner. Just as soon as this movement began to take place there came a sudden and serious depression in the textile industry from which it has not yet completely re-

covered. This depression would surely have been even worse than it proved to be had not motor vehicles been utilized to a considerable degree during the railroad transportation tie-up to keep goods moving.

With railroads, motor vehicles and air planes with perhaps large airships as well, it is inconceivable that such serious tie-ups of transportation facilities can ever occur again as have in the past. We have more miles of good highways, we have better and larger trucks. The railroads have awakened to the vital necessity of speed. Air transportation will make all transportation systems even more wide awake.

With transportation speeded up to the degree it is bound to be with the development of air transportation, it becomes comparatively easy for the manufacturer to turn his goods into money in much less time than is the case at present. He then will be in a much better position to offer more new and appealing things in textiles. He can stimulate sales by studying what promises to appeal to the general public and producing such things.

**Hand-to-Mouth Problems Solved**

Seasons will not be the problem they are now proving to be. Getting goods to customers who are in a great hurry for them will be greatly simplified. The money invested in goods in transit will be materially reduced. It will become increasingly easy to meet the situation where advance orders are small and hard to get, where the wholesalers and jobbers have greatly reduced their storage space and where retailers are unwilling to buy more at a time than they can place immediately on display and insist on having reorders shipped at top speed.

In other words air transportation gives every promise of stablizing business to a degree which under present conditions seems out of the question. It will make it possible for the manufacturer to make faster turnovers of his capital than has been possible in the past and thus reduce his cost of doing business. He will be in a position of giving better values, more effective sales assistance to wholesalers and retailers and in other ways stimulate business. Prices can be made somewhat lower and this will tend to increase the sales volume. Consumers can be persuaded to have more money invested at all times in textile materials than they are willing to invest under present conditions or feel it is necessary to invest. It is merely a matter of a more thorough development of air lines and of giving them more and more business.

The development of air lines at the present time is dependent only upon the available business. Air ports are being constructed. The air plane itself has been developed to a point where it is demonstrating its reliability and economy. Within a few years at the most the nation is bound to be covered with a net work of air lines. In the meantime it is perfectly feasible to experiment with the possibilities of this new form of transportation and some concerns and some industries are already doing this.

# Sloane to Sell Smith Carpets

## *Mohawk to Sell Direct Nov. 1, 1928— May Mean End of Smith Auctions*

A TRIANGULAR shift involving three of the most prominent concerns in the carpet industry was announced last Tuesday. In brief, W. & J. Sloane on Nov. 1, 1928, will cease to act as selling agents for the Mohawk Carpet Mills, Inc., and will begin so to act for the Alexander Smith & Sons Carpet Co., which has been selling direct. At that time the Mohawk Carpet Mills will enter the field as a direct selling organization.

Alexander Smith & Sons Carpet Co., now operating the largest carpet mill in the world, at Yonkers, N. Y., sold its products through the Sloane firm from 1878 to 1900, at which time the Smith company set up its own direct sales office under the sales management of Paul A. Heubner. He was succeeded by William H. Parkinson and on the latter's retirement, three years ago, E. A. Hagenmuller was appointed to that post. William Hetherington is president of the company. It operates 49,248 spindles and 1,514 looms. It manufactures axminster, velvet, tapestry and Wilton velvet rugs and carpetings.

W. & J. Sloane, Inc., began as a partnership in 1843. When the Smith account left them in 1900, they took on the Mohawk Carpet Mills of Amsterdam, which later acquired the two plants now known as the McCleary Division and the Shuttleworth Division.

The Mohawk organization makes Wilton, axminster, velvet, tapestry and chenille rugs and carpetings. George McNeir is chairman of the board and H. L. Shuttleworth, president of the Mohawk company. The direct sales office of Mohawk will be at 285 Fifth avenue.

W. & J. Sloane control a linoleum and felt base plant at Trenton and it is rumored that they will acquire or obtain distributing rights for a leading line of Wiltons which will be the only character of floor coverings not well represented in the Sloane organization under the new arrangement. It is understood that the Smith line will be moved into the present Sloane building at Fifth Ave. and 47th St.

Officials of the Smith company are non-committal as to the future of the semi-annual auctions which have been a feature of their merchandising. This matter will doubtless rest with the Sloane executives. It is understood at least on their past record that they are opposed to the auction method.

It is said that Smith's annual production amounts to $35,000,000 to $40,000,000. The annual Mohawk business is put at $20,000,000. In recent years the Smith auctions had run from $8,000,000 to $12,000,000 for a week's selling.

The two announcements of the coming change are as follows:

Announcement To the Trade: We announce that, effective Nov. 1, 1928, W. & J. Sloane, Inc., will act as sole selling agents for the products of Alexander Smith & Sons Carpet Company.

ALEXANDER SMITH & SONS CARPET CO.,
W. & J. SLOANE, INC.

Announcement To the Trade: We beg to announce that the selling agreement between the Mohawk Carpet Mills, Inc., and W. J. Sloane, Inc., will be terminated on Oct. 1, 1928, by mutual consent.

MOHAWK CARPET MILLS, INC.,
W. & J. SLOANE, INC.

Separate comment issued by Mohawk stated:

The Mohawk Carpet Mills, in commenting on the statement issued jointly with W. & J. Sloane, today stated that in entering the field as an organization selling direct to the trade, they are adopting a course which they have been preparing for during the past year, in the conviction that only through the establishment of their own sales department can the ultimate contact between manufacturer and trade, so necessary to successful service, be effectively maintained. Plans have been drawn for some time for the change announced today, and they will be announced in detail at the proper time.

## A. S. M. E. Textile Meeting Next Week

Plans are complete for the first national meeting of the Textile Division of the American Society of Mechanical Engineers, which will be held in Boston, Tuesday of next week, May 22.

The morning session will convene at the Hotel Statler at 9.30 a. m. and will be featured by the presentation of three technical papers. The afternoon will be devoted to an inspection trip through the plant of the Naumkeag Steam Cotton Co. at Salem, Mass. An informal dinner at 7 p. m. will be featured by addresses by three authorities in their respective fields.

James W. Cox, Jr., consulting engineer, 320 Broadway, New York, is chairman of the Textile Division.

## Annual Meeting of B. D. T. S. Alumni

The eleventh annual banquet and meeting of the Bradford Durfee Textile School Alumni Association will be held at the Hotel Mellen, Fall River, Mass., on Saturday, June 2.

The regular business meeting will start at 6 P. M. This will be immediately followed by a banquet. Following the banquet there will be an entertainment by well known talents.

The alumni will have for their guest Arthur Hirst, superintendent, of the printing division of the American Printing Co., and Sidney S. Paine, president, of the Textile Development Co., Boston, Mass.

Mr. Hirst will speak on the finishing and printing of textile fabrics.

Mr. Paine, who has had wide experience through the industry in the southern States and Canada as well as in New England, will give a talk on "High Lights of a Cotton Mill as seen from the Southern States and Canada."

## Confer on Distribution

### Vertical Conference Under Institute Plans Survey

The effect of hand-to-mouth buying on the cost of manufacture and distribution and the relationship between manufacturers and the wholesalers and retailers, mail order houses, chain stores and buying organizations were discussed on May 15 at a meeting held in the offices of The Cotton-Textile Institute, Inc., with representatives of cotton mills, selling agents, converters, finishers, wholesalers and retailers represented. This was the first meeting of the Committee appointed by the Distributors Conference held under the auspices of The Cotton-Textile Institute, Inc., last fall.

There was an exhaustive discussion of the varied phases of these questions, as to the causes leading to the marked changes in recent years in the methods of distribution and as to the present and prospective results of those changes. It was the sense of the meeting that the problems arising were of such a fundamental and important character that the obtaining of additional information ought to be carefully considered and that the entire subject ought to be further examined. A sub-committee was therefore authorized to obtain such further information as it might decide was necessary and to consider making specific recommendations to the Committee. The members of the proposed sub-committee will be promptly designated and the work undertaken at an early date.

Walker D. Hines, president of The Cotton-Textile Institute, Inc., presided at the meeting which was attended by:

Hon. Henry F. Lippitt, representing manufacturers through The Cotton-Textile Institute.

B. H. Borden and B. F. Meffert representing the selling agents through the Association of Cotton Textile Merchants of New York.

M. J. Warner, president of the Converters Association, and Albert Mannheimer, representing converters.

Albert R. White representing finishers through the National Association of Finishers of Cotton Fabrics.

S. M. Bond, president, Alvin E. Dodd, director-general, of the Wholesale Dry Goods Institute, and W. J. D. Bell representing wholesalers.

Ralph C. Hudson, president, National Retail Dry Goods Association, Edgar S. Bamberger and Peter V. Bouterse, representing retailers.

## Canadian Association to Hold Annual Meeting June 12

TORONTO, Ont., Canada.—The executive committee and officers of the Canadian Woolen and Knit Goods Manufacturers Association have been giving much study to the entry of imported woolen and knit goods into Canada at prices substantially below their market value in their countries of origin. The subject, it is reported, will be featured at the annual meeting of the association to be held at the King Edward Hotel, Toronto, on June 12, 1928.

# Multiplicity of Uses for Canvas in Navy Makes It a Leading User

## *For Shelter, Uniform, and Even Sail, Canvas Is Navy's Most Important Textile*

*By G. K. Spencer*

THOUGH the "new Navy" does not sail before the wind, as did the Navy of the days of marlinspike seamanship, nevertheless today it uses approximately twelve times the amount of canvas used by the combined Navies of the Union and Confederate States when their forces were at their apogee. The U. S. Navy of today is one of the largest buyers of canvas goods in the world, making its purchases for all its forces afloat and ashore. It also uses a considerably higher percentage of canvas goods than does the Royal Navy of England.

Both as a shelter and as a part of the naval uniform, and also in many strictly utilitarian uses, canvas is brought into many duties by the Navy, which equips every ship with several sets of complete awnings and all the Naval forces with adequate tenting so that Naval forces may take the field as infantry in times of emergency.

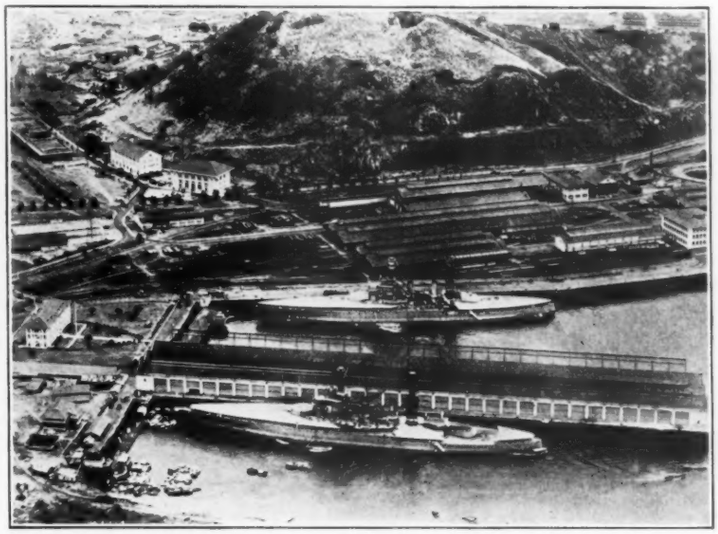
In the year of 1927, more than $500,000 worth of canvas and canvas goods was used by the Naval service and the United States Marines. Moreover this is a constantly recurring figure, for the vast awnings used on ships of the first combat line do not have so long life as they would if in use on shore. Their short-lived period is due to the combined attack of sea moisture and the hot oil flecks which frequently sprinkle over them during steaming at sea. In the Destroyer Squadrons, the awnings must be frequently renewed for this reason alone. If they successfully receive more than one cleaning, the ship's company is considered a very economical company, indeed.

### Canvas for Sails

However, in addition to other uses, canvas still enjoys a considerable vogue in the Navy as sail, for many of the smaller Naval units, notably the minesweepers, carry sail as well as engines, and when steaming with the Fleet at sea, these vessels add several knots to their best speed by rigging sail by which to take advantage of the wind. Even larger vessels occasionally rig up sail. In a recent cruise which the writer made aboard the U.S.S. Melville, mother ship to the Eleventh Destroyer Squadron, we rigged sail during most of the cruise in south Pacific waters, where the trade winds proved a valuable adjunct to the ship's engines.

The leggings bill, alone, of the Navy, in the course of a year reaches a high figure, for no less than 130,000 pairs of leggings are used by the Navy every year. Every sailor, marine and officer is equipped with the standard canvas legging. Unlike the Army, the officers of the Navy when on duty ashore use the canvas legging, it having been found by Naval medical doctors to be a more healthful and satisfactory leg dressing than the leather puttee, especially when on service in tropical lands, such as in the present Naval operations and Marine Corps operations in Nicaragua.

By purchasing in wholesale lots, the Navy realizes a very considerable reduction in price on these leg dressings, and is able also to extend the favor back to the manufacturer by paying cash for what leggings it buys. As a matter of fact, this ability of the Navy to pay cash for its purchases in canvas has always been one of the bright spots in the field, for during times of more than usual stress in the industry, the Navy endeavors to place its purchases and orders and thus relieve the temporary dullness. Naval orders are for this reason very welcome on the part of the manufacturers, a number of which have been frequently called to Washington for conferences covering this very angle. Bank loans and other credits are thus held down to a minimum, making Naval business an attractive proposition.



*Battleships New Mexico and Colorado at Dock at Balboa, Panama. This Airplane View Shows the Extensive Use of Canvas Awnings*

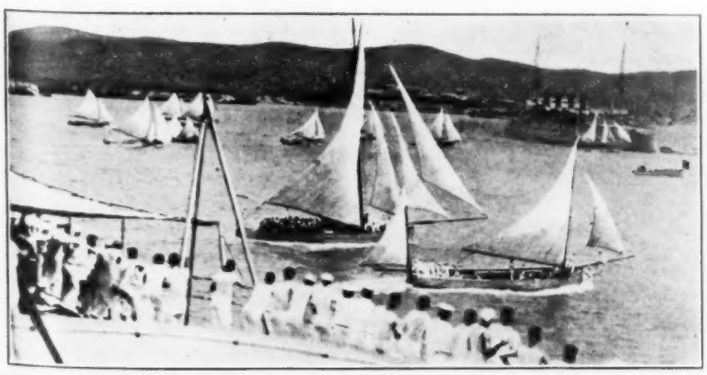
### Great Awning Yardage

The awning manufactured for the Navy is of an exceptionally heavy canvas, and the extraordinary character of a naval ship, with its various military masts and guy lines, requires a fine accuracy in cutting the textile so that it will measure correctly. Nevertheless, so closely do manufacturers meet the specifications that in a dozen years, there has been but one rejection by the Navy of the finished article.

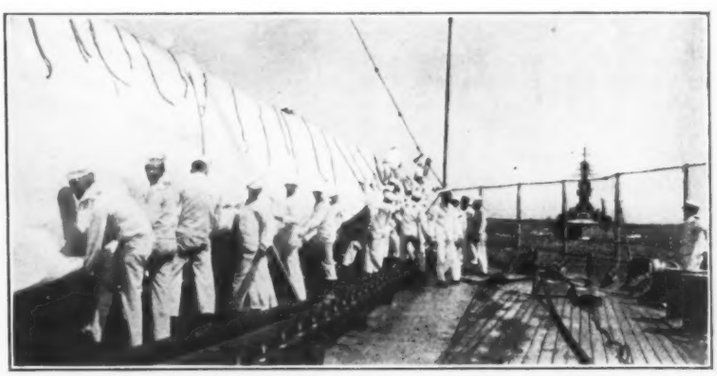
These awnings are utilized to cover the principal decks, such as the quarter deck, which is the especial deck devoted to the officers and to the formal activities of the ship, the forecastle, which is specifically the enlisted men's deck, is likewise covered, and other awnings shelter the midships' decks from the burning tropical suns. There are times in southern waters, in both the Atlantic and Pacific oceans, when the combined heat of the ship's engines and of the sun render the decks so hot that it is practically impossible comfortably to stand on them, unless awnings have been erected to ward off the heat of the sun. In the Destroyers, the steel decks reach almost a red heat unless awnings are utilized.

### Sea Bags and Hammocks

Another extensive consumption of canvas is met with in the Naval "sea-bag" and the hammock. Every enlisted man is allotted a hammock and he carries his clothing and personal effects in a "sea-bag," which is approximately three times as large as



*Much Sail Is Still Used by Navy. Here's a Sail Race at Guantanamo, Cuba*



*Hoisting Canvas Awnings on a Battleship*

the familiar Army kit-bag. Almost a hundred thousand of these bags are issued for use every year, including those issued to new recruits at the Training Stations, as they arrive to begin their Naval careers.

A somewhat less number of military packs are likewise issued. These are made under contract for the Navy and much resemble the Army back pack. They are used during operations on shore by both marines and sailors. A similar number of canteen covers and cartridge belts are also used, the Navy, like the Army, adhering to the canvas cartridge belt in preference to the leather bandolier as used by European military forces. In fact, on field service, the greater part of the Naval man's textile gear is canvas. His leggings, canteen covers, back pack, cartridge belts, medical cases and message pouches all being of canvas. Additionally, there is carried an immense amount of tenting.

The manufacturers of this equipment maintain the closest relations with the Navy and all information secured by either side is promptly transferred to the other. It is through the purchasing activities of the Bureau of Supplies and Accounts of the Navy that the industry has its closest contact.

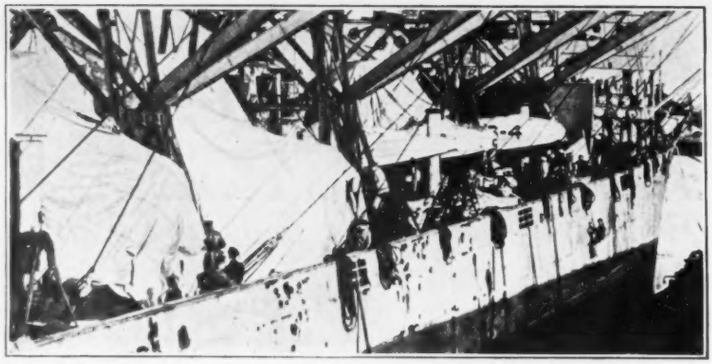
### The Purchasing Bureau

This Bureau maintains a purchasing organization in Washington which is believed to be the equal of any purchasing organization in the world in respect to its efficiency and to the magnitude of its operations and transactions. It acts upon well-established business principles and in conformity with congressional laws. There is as little of the so-called "red tape" allowed in this organization as is possible. As a result, naval supply officers have been given the right to make purchases of necessary canvas manufactured goods without bids, anywhere in the United States provided the need is urgent and the amount kept to a small and reasonable figure for each purchase.

The wide experience of the officers in charge of this purchasing organization, and the extensive records of business conditions and resources kept by it, have been beneficial to the industry, both as an index of business conditions and as a safety valve of such conditions.

The Navy studies its probable needs in relation to world conditions; that is, with the possibility of war or peace always before it, and after such study makes its purchases. The case of the Chinese and Nicaraguan expeditions are apropos. Canvas cases were purchased to the amount of not less than $50,000 to cover these expeditions alone. There are frequent emergencies such as these.

Coincident with the rapid expansion of the air forces, a complete new field opened in the canvas manufactured goods needed by the Navy, and to its canvas stock catalog were added a number of items which are now in standard manufacture for aircraft.



*Canvas Cases Are Used for Flying Boats*

The universal "canvasizing" of Naval forces in the field is an interesting phenomenon. At Culebra in the last Naval maneuvres on that island, the whole force carried more canvas than anything else, certainly more than of any other textile, from tents to water tanks, in which the water of the place was put to purify it and distribute it to the marines and sailors in the shore-operating squadrons.

### Portable Airplane Hangars

Another interesting adaption of canvas to naval shore operations is the portable airplane hangar. These are now manufactured and used in fair quantities, and it seems probable, judging by the large number of civilian aircraft firms which are following the Navy's lead and using canvas airplane hangars for emergency purposes—some for regular utility purposes—that the number of canvas hangars will rapidly grow as the distribution of private airplanes grows. A complete hangar, capable of covering a medium-size plane may be carried in the fuselage of the plane itself and used as a temporary shelter on long flights over wild terrain and in cross country flights over districts which have no hangarage facilities for strange planes dropping in.

The Navy was first to use the canvas airplane hangar, and the maneuvres of 1924, in the Caribbean Sea were the first general operations in which they were put to extended use. They proved to be satisfactory, according to a statement made to the writer by the then commander of the Aircraft Squadrons of the Battle Fleet.

*Marine Tents at the Island of Culebra, Virgin Island Group*

## New Bedford Strike

### Workers Settling Down for Long Struggle

NEW BEDFORD, MASS.—Settlement of the strike at the Old Colony Silk Mill, which was called by weavers at the same time as the cotton mill operatives went on strike in 26 of the plants in this city on April 16, was announced last Tuesday, and the workers returned to their machines at approximately the old rates. The exact terms of the agreement were not announced, but those concerned said that the final decision amounted almost complete restoration of the wage cut of 5 to 20% that had been announced.

The agreement was reached following a meeting held last Monday between workers and George Shutt, superintendent of the plant. Abraham Binns, secretary of the Weavers' Union, said: "An agreement has been reached, which is satisfactory to both sides." Workers at the Old Colony said prices on satins and crepe were restored to the old level, and sateen constructions split up.

Workers at the New Bedford Silk Mill have also been in session to take up the problem of settlement at that plant, with Samuel Ross, member of the State Board of Conciliation and Arbitration present. It is generally understood that settlement similar to that at the Old Colony plant has been effected at the New Bedford Silk Mill.

The fourth week of the textile strike has ended with practically no change in the situation that existed when approximately 25,000 workers went on strike April 16 against the 10% cut announced by 26 cotton mill corporations affiliated with the New Bedford Cotton Manufacturers' Association. The Dartmouth Mill, not affiliated with the organization, and the Beacon Mill, a corporation that broke away from the association when the reduction was announced, are operating their plants at practically normal, these being the only two cotton manufacturing plants running at the present time in the center of the fine goods industry.

It is estimated that by the end of this week, the workers will have lost more than $2,000,000 in wages, to say nothing of the loss sustained by the plants in having the machinery idle during the last month.

Since the early part of the strike, when the mayor made an ineffectual effort to bring the respective sides together for a conference, no attempt has been made by a third party toward a joint session to discuss the situation. The manufacturers have made no effort to open their gates, and the operatives are working toward consolidation of their ranks with a view to prolonged struggle.

During the last week, the respective locals forming the Textile Council have voted favorably toward affiliation with the United Textile Workers of America, which will give the workers direct recognition by the American Federation of Labor, and the privilege of seeking financial support throughout the country from unions holding membership with the A. F. of L.

Several minor clashes have occurred between representatives of the Textile Council, which is affiliated with the American Federation of Textile Operatives, and members of the Textile Mill Committees, an organization that established itself here soon after the strike went into effect. This T. M. C. organization is the one that got into the spotlight of publicity in the Lawrence strike and later in Passaic. In New Bedford it has drawn down the wrath of Mayor Charles S. Ashley and editorial criticism from New Bedford newspapers for having young children assist in picketing of the plants in the early morning hours.

Last Tuesday, police closed the south end headquarters of this organization, as the building was not licensed for the holding of public meetings. It has also been necessary for the police to increase the details of patrolmen on duty at the mill gates, with a view to stopping a recurrence of disturbances at the Wamsutta Mill gates recently, when officials and overseers of the plant were prevented from entering the mill gates.

The Textile Council, in addition to its central office, has established headquarters also in the north and south ends of the city, where open house will be held every day for the strikers. At the Washington Club, a social organization comprised of members of English descent or English born, a soup kitchen is distributing food four days a week to children of the strikers, feeding from 1500 to 2000 daily.

# THE TEXTILE OUTLOOK

## *Though Statistically Weak, Silk May Be Expected to Retain Stability, Says Dr. Haney*

APRIL developments appear to have somewhat weakened the market position of raw silk. As long as bank credit does not become strained and the stock market holds, no real break in silk prices is probable; but should there come a period of liquidation, silk values might react quite sharply.

### *Bull Points Affecting Silk*

Conditions tending to put silk prices up are as follows:

(1) ***Silk is cheap, being relatively the cheapest of the main textile materials and below its usual relationship with the general level of commodity prices.***

(2) Japanese stocks of the higher grades are small and cocoons are reported to be of poor quality, which tends to limit the quantity of silk suitable for export.

(3) Arrivals from the filatures are said to be decreasing.

(4) The Shanghai market has been strong.

(5) ***Imports of silk into this country are low in comparison with the indicated consumption.***

(6) Markets for silk yarns are relatively strong.

(7) The hosiery business is fairly active.

### *Bear Points Affecting Silk*

On the other hand, a number of factors are operating to bring lower prices for Japanese silk, as follows:

(1) The supply of rayon is large and the increase in the output of finer grades is leading to a greater use of this material by silk manufacturers. This tends to reduce the demand for raw silk.

(2) ***The United States storage of silk is the largest for the season in recent years, except in 1925, and the quantity in transit is reported to be large.***

(3) The volume of transactions in the Japanese market has for some time been unusually small.

(4) Yen exchange is unsettled and lower.

(5) ***The sharp curtailment of production by the domestic silk mills, particularly notable in the case of spindle activity, indicates lower consumption.*** Also curtailment in the manufacture of fine cotton goods operates in the same direction.

(6) Broad loom activity, according to the latest available statistics, has been excessive in comparison with the sales of silk goods, indicating over-production.

(7) It is generally agreed that silk manufacturers are operating on very narrow margins of profit and that many lines are selling below replacement cost. This tends to bring curtailment, and it indicates a condition of weak demand for silk textiles. The manufacturers are offering strong price resistance.

(8) ***Sales of silk goods both by manufacturers and wholesalers continue to run below a year ago.*** It is believed that printed goods have been overproduced and that the business in these goods has been hurt by the early showings and the lateness of the spring season. Evidently "sales" are required to move the large stocks of cheaper materials.

In view of the foregoing analysis it seems out of the question that any consistent advance in silk prices can occur and that any change will be toward moderately lower levels.

### *The Statistical Position is Weaker*

Much optimistic talk has appeared in recent months based on the increase shown in the reported "deliveries" of raw silk,—often erroneously called "consumption." If this talk has been well founded the question now is, What conclusion is to be drawn from the sharp decline in the deliveries that occurred last month? Deliveries in April fell off more than 20%. They were 13.8% below those in April, 1927, which is the largest decrease from the same month of the preceding year that has occurred in a long time. In fact the April decline in deliveries was the sharpest monthly decrease since May, 1923.

This movement must mean either a reduction in consumption, or smaller re-exports, or a decrease in the quantity of silk withdrawn from storage for speculative holding by the mills or others. We have no way of determining the trend of mill consumption in April, as the machinery activity figures for that month are not available at this writing, but the probability is that there was some decline. Such a sharp reduction in spindle activity as occurred in March usually carries through for a month or two at least. It seems difficult, however, to believe that the drop in deliveries represents nothing more than a decline in consumption and it is probable that those who have been withdrawing silk from storage for speculative holdings have come to the conclusion that they have enough.

The reported stocks of raw silk also decreased in April, but only about 11%. They were actually 11.8% greater than a year ago. At the end of April, 1927, silk stocks in this country were only 66% of the reported deliveries for the month, and the year before that they were only 81%. Last month, however, the storage amounted to 86% of the deliveries. ***Except for 1925, this is the highest ratio of stocks at the end of a month to deliveries during the month that has appeared in recent years.*** It seems certain that domestic stocks are quite comfortable in comparison with requirements.

That the storage situation is not worse is due

## Textile World Analyst

***The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.***

### SUMMARY—SILK

**1. The statistical position of silk was weakened by the changes that occurred in April, and, as the demand has been reduced by mill curtailment, prices will probably be weak. However, the supply of the finer grades is small and silk prices are comparatively low, so that no large decline is to be expected. For the near future approximate stability is likely.**

**2. Yarns appear to be in a relatively strong position, while broad silks have been over-produced.**

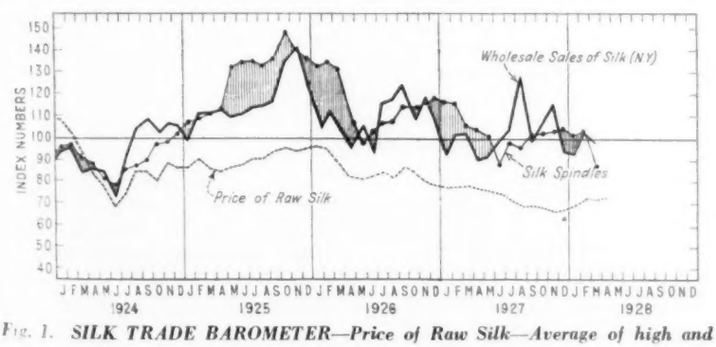

INDEX NUMBERS
150
140
130
120
110
100
90
80
70
60
50
40
Wholesale Sales of Silk (N.Y.)
Silk Spindles
Price of Raw Silk
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1924
1925
1926
1927
1928

*Fig. 1. **SILK TRADE BAROMETER**—Price of Raw Silk—Average of high and low Thursday prices of Kansai Best No. 1 (Journal of Commerce). Spindles—Per cent. of available machine hours operated (Silk Association of America). Wholesale sales of silk (N. Y.) adjusted for seasonal variation (N. Y. Federal Reserve Bank). Average 1922–1925 = 100 for all indexes.*

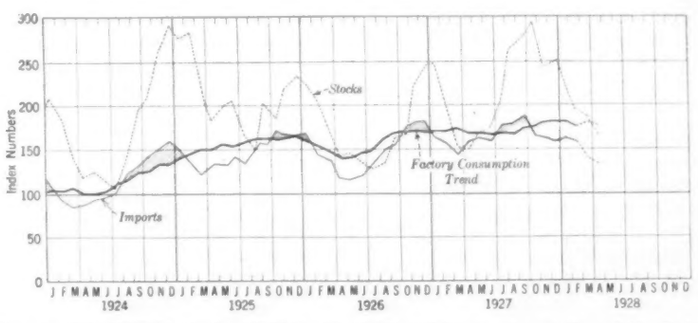

Index Numbers
300
250
200
150
100
50
0
Stocks
Factory Consumption Trend
Imports
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1924
1925
1926
1927
1928

*Fig. 2. **STATISTICAL POSITION OF RAW SILK**—Stocks of Raw Silk, Bales in storage at end of month. Average 1921 = 100 (Silk Association of America). Imports, Pounds. Average 1921 = 100. Three months' moving average (Dept. of Commerce). Last month estimated by converting each item of Silk Association figures from bales to pounds and then applying the per cent. increase to preceding month. Factory Consumption Trend, Deliveries—Bales, average 1921 = 100. Five months' moving average (Silk Association of America).*

to the large decrease in imports during April, as reported by the Silk Association. The decline in imports in that month amounted to over 27% and brought the figure to a point 21% lower than imports in April, 1927. But at 36,555 bales the imports last month were larger than those in April of 1925 or of 1926. Shipments from Japan to America thus far this year have much exceeded those in the same period of 1927 or any other recent year. Imports in April amounted to 88.6% of the deliveries for the month, in comparison with 97.1% last year and with 81.5% and 84.4% in the Aprils of 1925 and 1926, respectively.

***Though the supply of some grades seems to be decidedly small, the total storage at New York and Yokohama, combined, has been holding up better than usual for the season. It was nearly 65,000 bales at the end of April, which is about 13,000 bales more than a year ago and nearly 4,000 bales greater than in 1926, the relatively large proportion in New York being notable.***

Allowing for seasonal variation the average combined stocks at New York and Yokohama during the last three months have been nearly 10% greater than the general level of stocks during the years 1922-1926, inclusive, and it seems reasonably clear that they are above normal. They are ***unquestionably above the usual relationship to the requirements for silk in this country, as judged by the level of machinery activity.***

In sum, while the decline in deliveries during April does not mean a decline in actual consumption, any more than the preceding increases meant gains in consumption, it does not reflect a weakening in the whole statistical position.

The price of the Kansai Extra grade in April averaged about $5.20, which represents an increase from $5.12 in March. The April average price was 72.2% of the average for the four years 1922-1925, which compares with index numbers on the same basis of 71.1 in March, 71.9 in February, and 78 a year ago. Thus the April average was much below that of last year and was only slightly higher than the February level. It represents, however, a little recovery from March and one may note that this is the first April since 1923 in which the average price has not declined from the preceding month.

### *Over-Production and Weak Demand Bring Curtailment*

Most reports agree that the markets for raw silk are very dull and that trading is spotty. Price resistance has become an increasing factor, buying being almost entirely in small quantities for immediate requirements. ***This dullness in the markets for the raw material and the inability to maintain advances is a reflection of the relatively small volume of sales of silk textiles and of the very low level to which spindle activity has fallen. Spindle activity in March, allowing for the usual seasonal changes from month to month, was the lowest since June, 1924, and the decline in that month was the sharpest that has occurred since April, 1926.*** This setback in spindle activity, moreover, carried the curve below its usual relationship to wholesale silk sales, which may generally be taken to indicate progress toward correcting a condition of over-production. ***As to yarns, such progress toward stabilization is probably a fact.*** Indeed, spindle activity is unusually low in comparison with the activity of broad looms.

***But when we come to compare loom activity with wholesale silk sales, we find the trouble. Loom activity in March was decidedly excessive.*** Broad looms appear to have been operating at near-record levels, considering the season, exceeding even the high point reached in November, 1925. This is so far above the usual ratio to wholesale silk sales as to indicate serious over-production.

In view of the fact that March sales were below average and failed to show the usual seasonal gain over February, and considering that current trade reports indicate little if any improvement in April, the indications as to the demand for silk and the probable trend of silk prices as affected by demand, are not bullish. Silk will do well to hold the present level.

Certain other indications point to even lower prices. The easier statistical position has already been noted; but in addition we would emphasize the foregoing period of excessive "deliveries" that now seems to be drawing to a close. The ratio of deliveries to spindle activity has been extremely high for some months, much exceeding the ratio reached in the latter part of 1922. Even in comparison with loom activity, the deliveries, though somewhat lower, also seem excessive. Finally, when compared with the level of employment in silk manufacturing the deliveries have also been clearly out of line. ***Somewhere, assuming the delivery figures to represent an actuality, there is much silk in this country that is not included in the "storage" figures of the Silk Association.*** This raises the question, will the tightening of credit and the probable period of liquidation in the stock market that lies ahead, not force some liquidation of these invisible supplies? Surely the holders have no great encouragement in the condition of the goods markets or in the outlook for machinery activity.

## Commemorates John Thorp Anniversary

RALEIGH, N. C.—The North Carolina State College Textile School recently commemorated the 100th anniversary of the invention of ring spinning by John Thorp. L. R. Gilbert, president of the Southern Textile Association, and manager of Audrey Spinning Mills, Weldon, N. C., spoke to the textile students on the "Evolution of Textile Machinery" and traced its development from the old distaff and spindle to the present time.

C. S. Tatum, general manager, Pilot Division, Consolidated Textile Corp., gave an interesting talk on the "Relation of the Textile Schools to the Textile Industry." Mr. Tatum was a teacher in a textile school for ten years and since entering into the manufacturing end of textiles has employed many textile school graduates.

The students were also addressed by J. M. Gregg, secretary of the Southern Textile Association, who spoke of the opportunities offered by the textile industry to young men who have had a textile education.

L. E. Taylor, representative of the National Ring Traveler Co., gave a lecture on May 9 to the students of the North Carolina State College Textile School on the subject of "Ring Travelers." Mr. Taylor demonstrated his lecture by use of a stroboscope on the spinning frame. Mr. Taylor was assisted by J. K. Moore of the National Ring Traveler Co.

## A. C. M. A. Convention Report Next Week

**The annual meeting of the American Cotton Manufacturers' Association resulted in a large attendance at the sessions in the Hotel Jefferson, Richmond, Va., on May 17 and 18. An interesting program was offered, and because of its broad scope it touched upon many of the present-day problems which are vexing manufacturers.**

**A full report of this convention will be given in TEXTILE WORLD for May 26.**

## Southern Delivery on N. Y. Cotton Contracts May Soon Be Law

WASHINGTON, D. C.—After years of controversy it looks as if a showdown on the proposal for southern delivery of cotton on New York contracts would come within the next fortnight. It seems almost certain that if Congress enacts any legislation affecting cotton trading before adjournment, it will provide for southern delivery. The only apparent obstacle is the competition of the spot cotton markets for designation as a delivery point and this may be sidestepped by eliminating mention of any specific points in the legislation under consideration.

Southern delivery is proposed in bills favorably reported from both the Senate and House committees on agriculture and Senator Smith, of South Carolina, has introduced a bill amending the Cotton Futures Act in several respects, the principal feature of which is southern delivery. The Smith bill is generally similar but simpler in character than the Vinson bill approved by the House committee. It would appear that if the House and Senate should act independently on this legislation that their differences could be ironed out in conference.

Efforts of Gardiner H. Miller, vice president of the New York Cotton exchange, to get reconsideration with respect to the recommendations for southern delivery have been rebuffed. It is expected that the House Rules Committee will grant a special rule to bring the Vinson bill up on the floor within a few days.

## Knitted Outerwear Convention on June 28–29 at Cleveland

The National Knitted Outerwear Association will meet in Cleveland, Ohio, on June 28 and 29, 1928. Headquarters will be at the Hollenden Hotel. Executives state that this is probably the most important convention they ever held. The association will determine its tariff policy and outline its tariff plans at this meeting. It is recognized that there is influential pressure, supported by a large section of public opinion demanding lower tariffs, which the knitted outerwear industry must be prepared to combat.

Other vital questions will also be considered, such as reduction of trade evils (unjust returns, misrepresentation, style piracy), extending the market for our products, etc. Ellery B. Gordon is executive secretary. Announcement of the meeting urges members to bring non-members with them.

## Lew Hahn Leaves Retail Association to Head Store Chain

Formation of the Hahn Department Stores, Inc., and the appointment of Lew Hahn as president is announced by Prince & Whitely, bankers interested in the project. It was also learned that Mr. Hahn has resigned as managing director of the National Retail Dry Goods Association to assume his new connection.

It was reported unofficially that the company intends to operate a chain of already established department stores in the class doing business of from $2,000,000 to $5,000,000 annually.

The incorporation papers, as filed at Dover, Del., indicated that the capitalization, given at 10 shares, no par value, was purely nominal. The incorporator was given as A. L. Muller, Wilmington, Del., Corporation Trust of America, Wilmington, Del., agent.

# WITH THE EDITORS THIS WEEK

*Editors:* Charles H. Clark, Vernon E. Carroll, Clarence Hutton, Douglas G. Woolf — *We Believe in the Conservation and Protection of Domestic Industries*

## *Value of Information*

INFORMATION about one's own business or an industry's business is coming to be recognized as an essential in the process of modern merchandising. Many important industrial units banded together in associational work have carried the collection of vital statistics to a point where the resultant picture furnishes a bird's eye view of the situation from week to week or from month to month. This enables a planning of manufacturing activities, as well as an elimination of uneconomic procedure which tend to remove guesswork and develop health and stability in industry.

The textile industry has been backward in adopting a program of this kind largely because of excessive individualism and unwillingness to cooperate with competitors, but also because they have not been sufficiently impressed with the value of data obtainable upon the conduct of their own business or upon the status of the specific division of which they form an integral part.

If there ever was an illustration proving the desirability of uniform cost data to the textile trade it was disclosed in the report read at last week's annual meeting of the National Association of Worsted and Woolen Spinners. This report disclosed a variation in estimated costs on a single number of 30 cents a pound. And yet this discovery was not startling enough to convince members of this association that they should unite to develop uniform cost methods.

The same association is now offered a free survey of their condition by a disinterested, scientific body which promises data which should be of invaluable assistance to the spinning industry. Here again the results will be of little value unless there is whole-hearted cooperation and a willingness to provide statistics of productions, stocks on hand, etc. If the same spirit prevails as in the past, leading members of the association to the conclusion that the collection of these figures will be of little general or specific value, the result will be of little importance and will not justify the time and effort expended.

There was no question that the presentation of the survey excited universal interest among the comparatively small proportion of the industry who heard its details and the possibilities of accomplishment. It remains to be seen whether this enthusiasm can be maintained and communicated. Very frequently determination to do a worth-while job formed under the stress of group enthusiasm does not issue in actual compliance with necessary details. It certainly is to be hoped that worsted and woolen spinners will appreciate the value which comprehensive data can be to the industry at large as well as to individual units and will take the trouble to see that the figures asked for are conscientiously collected and regularly forwarded. Enough is known about the deplorable condition surrounding this section of textile manufacture, but altogether too little is known about the causes for this condition or the possible remedies. Definite knowledge will lead to effort for correction which should spread into all divisions of wool manufacture. It is logical spinners should lead in this reform, but little can be done unless comprehensive data are regularly received from each individual unit.

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## *Southern Delivery for New York*

AS forecast in these columns the logical outcome of the Congressional cotton investigation is southern delivery on New York futures contracts, and certain other amendments of United States Cotton Futures Act designed to restrict speculative manipulation of the market. TEXTILE WORLD has always been an advocate of southern delivery and it believes that the best interests of the country will be better conserved by this and practically all other amendments proposed by Senator Smith of North Carolina, excepting, possibly, that one which would give a control committee the power to limit the interest in futures contracts for delivery in any one month of any individual, firm or corporation.

It is possible that the provision restricting such action of a control committee to determining and preventing manipulation, or the cornering of cotton, may prevent the abuse of the power thus delegated, but the power to thus limit legitimate hedging operations simply because an individual or firm has built up a large business establishes a dangerous precedent and one whose legality is questionable. Furthermore, this amendment is directed specifically at one large firm that has been under fire and that has emerged from the investigation with its ability and reputation considerably enhanced.

A large percentage of the members of the New York Cotton Exchange have favored southern delivery for several years, although many of them would have preferred also the alternative of New York delivery. For failure to anticipate and avoid additional Governmental control the exchange must place the blame upon that large proportion of its members who are in the business for the speculative opportunities that it affords rather than for the performance of any legitimate service to the industry. Growers and manufacturers may have their differences, but when it comes to the stamping out of illegitimate cotton speculation their interests are identical.

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## *Fine Goods Curtailment*

WE wonder if the New Bedford community, including union leaders and mill operatives, understands the significance of the fact that at the end of the fifth week of the strike no business of real consequence has been diverted from that city's mills to outside fine goods mills, other than a few located in the South! Analyzed in an unbiased manner it proves that both wage cut and curtailment were needed to rehabilitate the market, and that curtailment must be much more protracted if the market is to be placed on a remunerative basis for the mills after the wage cut has been enforced.

New Bedford fine goods manufacturers have two fights on their hands: One with the operatives to enforce the wage reduction, and another with buyers of their products to enforce adequate prices therefor, the latter fight being modified by competition of outside mills. In such a fight to the finish New Bedford mills not only ought to have the hearty cooperation of their stockholders and operatives, but also of their competitors, for, excepting southern mills and those northern mills that have already cut wages, the outside mills are no better able to operate profitably than are New Bedford mills.

It will be the first of July before many buyers become anxious about the future of the market, and if New Bedford manufacturers and operatives can maintain their disagreement

### THE TEXTILE TREND

***Cotton Markets:*** Goods market remains sensitive to raw cotton changes, but on whole quieter than last week. Fair support for finished goods with percales and prints still best. Bleached goods slower after recent improvement. Business in wash goods lags. Gray goods slightly easier with second hand price of 7¾c on 64 x 60s met by a few first hands. Sheetings stationary with buyers cautious. Fine goods strong yarns uncertain; buyers holding off.

***Wool Markets:*** Wool goods business fell off after first week in May and is again quiet and lagging. Only exceptional mills are well sold. Merchants seek means for broadening market. Preparations for spring 1929 well under way but no reason seen for early opening. Sellers foresee firm wool; buyers are doubtful. Scattered advances of fabrics continue. Further rise in ¼ blood yarns with active trading in outerwear numbers; demand from men's wear mills improving.

***Knit Goods:*** Underwear market is a weather market at present. Lack of current business is laid to weather and belief expressed that trade will improve if a warm wave were to sweep the country. Optimistic reports noted from West. Higher prices on both cotton and wool underwear for fall considered likely. Selling agents keep men on road. Increase in variety of outerwear items is reducing profits. Fair duplication on sweaters. Bathing suits disappointing.

***Silk Markets:*** Competition assumes still more serious phase in nearly all lines of staple goods. Prices reported closer than ever, with mills paying no attention to scarcity of all high grade silk and its high replacement value. Georgettes move in volume, but quotations on staples are lower even than three or four months ago. Curtailment in mills being forced by scarce raw silk and low goods prices.

and curtailment that long, and the latter will then accept the wage cut peacefully, it may be possible to assure them continuous employment, and stockholders may look eventually for a return of fair dividends on their investments. Longer continuation of the strike might prove disastrous for New Bedford mills, operatives and stockholders through the diversion of business to outside mills.

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### *Good-Will Advertising*

HAVE you noticed, and are you doing anything to capitalize the good-will advertising that is being done in national mediums by the Standard Oil Co. of New York and certain other big corporations having a national distribution for their products?

A double page spread of Socony gasoline and motor oil, run in the *Saturday Evening Post* in one issue of each of the months of April, May and June, carries the slogan "Come to New England This Summer and See the Work Shop of the Nation." One live New England manufacturer (not textile) cleverly ties up his merchandising compaign with this series of advertisements by mailing to each of his present and prospective customers a letter seconding the invitation and inviting them to visit his plant.

It is not surprising that the Yankee should visualize the opportunity to tie up with such advertising at small cost, but what about the section, the state and the community? And if any or all of these tie up with this series of advertisements, what a boost for the good-will program of Socony! Viewed in its larger aspects, however, is not this good-will type of advertising adaptable to some of the larger textile corporations having national distribution and lines identified to the consumer, or may it not be adaptable to cooperative textile advertising having as its chief objective the popularizing of domestic products for domestic consumers?

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*SPINNERS' MEETING POSTPONED*

***At the request of the Southern Textile Association, attention is again called to the fact that the meeting of the Spinners' Division of that association, which was originally scheduled for May 23 at Lake Lure, N. C., has been postponed until some time after the annual meeting. The latter takes place at Wrightsville Beach, Wilmington, N. C., June 15 and 16.***

## Prepare for Annual Meeting of Wool Institute

The first annual meeting of the Wool Institute, Inc., will as previously reported take place on May 23 at the Hotel Roosevelt, New York. Representatives of wool merchants, spinners and apparel manufacturers have been invited to the morning session and luncheon. The afternoon session will be restricted to weaving mills when there will be open discussion on important topics.

The first meeting of the ¾ woolens group and the second meeting of the men's wear woolens group originally scheduled for May 15 and 16 will be held on May 24.

At last report the Institute's membership had increased to 141 mills operating 42,084 looms, or 64.7% of the total loom equipment of the industry. The cost questionnaire, sent to all mills, has been replied to by 105. W. L. Keating in charge of costs has visited 35 mills.

Statistics on production and billings for March were supplied by 123 mills operating 36,778 looms.

The statement on price policy has been signed by 125 mills representing 31,989 looms, of which number of mills 96.7% answered "yes" to the first three questions.

## House Passes Cooper Bill

WASHINGTON, D. C.—The House passed on May 15 the Cooper bill to divest prison-made goods of their interstate character, to become effective three years from the date of its approval by the President. Under the provisions of the bill, the disposition of products made in penal institutions is rendered subject to State regulation, whether the goods in question are made in the prisons of the same or another State. The bill passed by a record vote of 299 to 40, after determined efforts were made to attach amendments to the measure as reported from the House Committee on Labor. The postponement of its effective date was brought about by an amendment offered by Rep. Garrett, of Tenn., and this was the only amendment accepted by the House. The bill as reported from committee provided that it should become effective two years from date of enactment. A similar bill, sponsored by Senator Hawes, now is pending on the Senate calendar.

## "A Thousand Uses for Cotton" Issued by Commerce Dept.

WASHINGTON, D. C.—One hundred and thirty-five basic fabrics made wholly or partly of cotton, together with approximately a thousand different uses to which they are put, are listed in a bulletin just issued by the Commerce Department. This bulletin, which may be had upon request, represents the completion of the first phase of the Department's "new uses for cotton" investigation, recently undertaken with the cooperation of the Department of Agriculture and The Cotton-Textile Institute. The second phase, which is now under way, will have for its objective the discovery of new and extended uses for cotton and cotton products.

Cotton fabrics are used extensively, the bulletin shows, not only as wearing apparel and in the household, but also on the farm and in a great number of manufacturing industries. Duck or canvas is usually associated with tents and sails but the bulletin indicates that it is used in more than 100 different ways. Gingham, ordinarily a dress fabric, has more than 30 uses as has also cretonne. The continued growth of the automobile industry has brought about a huge demand for fabrics for upholstery, tops, brake linings, etc. while the development of the airplane is creating a demand for cotton fabrics for wings, fuselage covering, parachute cases, etc. According to the bulletin, more than 150 separate articles made of cotton are used on the farm; 100 are listed as used in the household; 43 by railroads and about 20 for "industrial uses."

### TEXTILE CALENDAR

**Textile Division, American Society of Mechanical Engineers, National Meeting, Statler Hotel, Boston, Mass., May 22, 1928.**

**International Association of Garment Manufacturers, Annual Meeting, Hotel Stevens, Chicago, May 22-24, 1928.**

**The Wool Institute, Annual Meeting, Hotel Roosevelt, New York City, May 23, 1928.**

**Chattanooga Yarn Men's Association, Annual Golf Tournament and Banquet, Chattanooga (Tenn.) Golf and Country Club, May 24–25, 1928.**

**Philadelphia Wool & Textile Association, Annual Outing, Mohican Club on the Delaware near Philadelphia, May 26, 1928.**

**Philadelphia Textile School Alumni Association, Annual Outing at Manufacturers Country Club, Oreland, Pa., and Banquet at Manufacturers Club, Philadelphia, June 8, 1928.**

**Canadian Woolen and Knit Goods Mfrs. Assn., Annual Meeting, King Edward Hotel, Toronto, Canada, June 12, 1928.**

**Southern Textile Association, Annual Meeting, Oceanic Hotel, Wrightsville Beach, Wilmington, N. C., June 15-16, 1928.**

**North Carolina Cotton Manufacturers Association, Annual Meeting, Sedgefield Inn, Greensboro, N. C., June 22–23, 1928.**

**Spinners Division, Southern Textile Association, Regular Meeting. (Date to be announced.)**

**Philadelphia Textile Manufacturers Association, Annual Field Day, Manufacturers Country Club, Oreland, Pa., June 26, 1928.**

**Committee D-13, American Society for Testing Materials, Annual Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 26, 1928.**

**National Knitted Outerwear Association, Annual Convention, Hollenden Hotel, Cleveland, O., June 28-29, 1928.**

**Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 15-20, 1928.**

**Southern Textile Association, Semi-annual Meeting, Greenville, S. C., Oct. 19, 1928.**

**Associated Knit Underwear Manufacturers of America, Annual Meeting, Hotel Utica, Utica, N. Y., Nov. 14-16, 1928.**

## Merchandise Expert Joins Staff of Rayon Institute

Dwight Mead, formerly with The Shepard Stores of Boston, will join the staff of the Rayon Institute on May 21, as merchandise expert, according to announcement by Ernest L. Starr, director of the Institute.

"Mr. Mead, who for four years has been first assistant to J. B. Swinney, of The Shepard Stores, has a fine record in silk, wash goods, piece goods and (dress) lace departments and his splendid name as a department store man ably fits him for his new post," said Mr. Starr.

"As a liaison between the Rayon Institute and the retail stores of the United States, Mr. Mead will spend time both in and out of New York. His headquarters, however, will be at the Rayon Institute's office here."

## Osnaburg Is Popular for New Uses

Once used only in cotton picking bags, potato bags, and work clothing, osnaburg is becoming popular as a fabric to brighten up the week-end river camp or summer cottage.

Osnaburg is durable and can be laundered easily and will look well with almost no care. It has been found excellent for sleeping porch covers, couch swings and the innumerable porch and boat pillows.

It also can be used for curtains, doorway portieres or draperies. Osnaburg draperies, banded with cretonne in gay colors, can be made to match a bedspread, similarly decorated.

## Senate Acts to Prevent Federal Prediction of Cotton Prices

WASHINGTON, D. C.—The Senate passed on May 11 the Heflin bill prohibiting predictions of cotton prices in any report or other publication issued by a Government agency. Any officer or employe who violates the act would be subject to a fine of not more than $15,000 or imprisonment for not more than five years or both. The Senate bill is now in the hands of the House Committee on Agriculture.

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***Little Falls Fibre Co., Cohoes, N. Y., which recently consolidated with the California Cotton Mills Co., Oakland, Cal., is now operating under the new name as the National Automotive Products Corp. Management of the company will remain the same but it is said that the mills may be expanded in the future.**

# THE PERSONAL PAGE

**John Barnes,** president of the Blood Knitting Co., Amsterdam, N. Y., has been elected a director of the F. J. & G. Railroad for the ensuing year.

**George Otis Draper,** of the Draper Corp., Hopedale, Mass., has returned from a 2 months' Mediterranean trip.

**Nicholas E. Devereux, Jr.,** secretary of the Oneita Knitting Mills, Utica, N. Y., has succeeded his father, the late N. E. Devereux, as trustee of the Utica Savings Bank.

**Newberry (S. C.) Cotton Mills.** At the annual meeting of the stockholders of the Newberry Cotton Mills the following directors were elected: F. Z. Wilson, John M. Kinard, F. N. Martin, B. C. Mathews, J. M. Davis, R. D. Wright and Z. F. Wright. Z. F. Wright was elected president, F. Z. Wilson vice-president and F. N. Martin secretary.

**H. G. Safford,** of McCaa & Safford, of Houston, Texas, was elected vice-president of the American Cotton Shippers' Association, which held its convention recently at Savannah, Ga.

**James Tierney,** formerly treasurer of Moore & Tierney, Inc., Cohoes, N. Y., is passing a several weeks' vacation at Atlantic City.

**R. B. Knox,** secretary and treasurer of City Cotton Mills Co., and **J. A. Gaither,** secretary and treasurer of Ridgeview Hosiery Mill Co., Newton, N. C., were both elected to the board of aldermen of Newton.

**Horace Allen** has been elected a member of the board of directors of the Shirreff's Mills, Fitchburg, Mass.

**J. W. Penden,** associated with the Henry Ford interests for many years as flax expert, has accepted the management of the Oregon Linen Mills, Inc., Salem, Ore., to succeed **R. C. Snelling,** who recently resigned.

**William Muir** has been appointed general superintendent of the cotton and woolen departments of the Thorndike Co., West Warren, Mass.

**L. C. Cahill** is now production manager of the plant of the Frisbie & Stansfield Knitting Co., Utica, N. Y.

**John S. Strowd,** superintendent and assistant manager of the Erwin Cotton Mills Co., Coomeelee, N. C., has resigned on account of ill health. Mr. Strowd will be succeeded by **Carl R. Harris,** who for some years has been assistant superintendent of the Inman (S. C.) Mills.

**J. C. Cameron,** formerly superintendent of Horner Bros. Woolen Mills, Eaton Rapids, Mich., has accepted a position as superintendent of the Norad Mills, Inc., North Adams, Mass.

**Jessie L. Hirst,** for 3 years superintendent of the Asbestos Textile Co., North Brookfield, Mass., has resigned and will be succeeded by **L. B. Coler.**

**Richard Russell,** former superintendent of weaving at the Dartmouth Mfg. Co., New Bedford, Mass., has accepted a similar position with the mills of the Aldrich Bros. Co., Moosup, Conn.

**Halbert Webb,** who has had charge of the dyeing department of the Hartsell Mills Company, Concord, N. C., has accepted a position with the Roanoke Mills Co., Roanoke Rapids, N. C.

## "DO YOU KNOW?"

*By what two methods is the hydrogen-ion concentration of solutions determined?*

*What are the advantages of keeping dyes in solution rather than in powdered form?*

*Why do we sometimes see old worn-out awnings suspended only by their colored stripes?*

*What are the cheapest and best waterproofing materials for canvas?*

*Is a neutral soap a safeguard against alkali absorption in wool scouring?*

*What causes increased yellowing of wool when heated?*

*What characteristics determine the value of a soap for wool scouring?*

*Under what circumstances should sulphuric acid be added to the wash after vat dyeing?*

**If you are interested in the answers to these questions, you will find them in articles in this issue.**

**R. D. Harvey** is now assistant superintendent of the Massachusetts Cotton Mills, Inc., Lindale, Ga.

**George E. Leighton,** agent for the Barre Wool Combing Co., Ltd., South Barre, Mass., has returned from a 6 weeks' visit to his home in Bradford, England.

**A. T. Spaulding,** formerly agent of the Newport Mills, American Woolen Co., Newport, Me., has accepted a similar position with the North Berwick (Me.) Co. succeeding **Lloyd L. Sykes,** who goes to the Wilton (Me.) Woolen Co. as superintendent.

**J. Ira Orr,** for the past 2 years head of the production department of the Hamilton Woolen Co., Southbridge, Mass., has resigned.

**Clark Partlow,** for the past 21 years overseer of carding for M. T. Stevens & Sons Co., Franklin, N. H., has resigned his position with that company.

**Thomas F. Cregan** has taken the position as overseer of carding and spinning for the Adams (Mass.) Woolen Mills.

**I. Clark Partello,** overseer of carding at the Franklin (N. H.) Mills for 21 years, has resigned to take a long vacation.

**W. K. Waites,** for the past 9 years overseer of spinning in the Greenwood (S. C.) Cotton Mills, has been appointed superintendent to succeed **J. G. McNeill,** who was recently promoted to superintendency of the Ninety-Six, (S.C.) Cotton Mill. Mr. Waites is succeeded in his former position by **J. T. Ficklin.**

**J. A. McCarns,** overseer of spinning at the Imperial Yarn Mills, Inc., Belmont, N. C., has resigned.

**S. A. McHaffey** has taken the position of overseer of spinning and twisting at the Kings Mountain (N. C.) Mfg. Co.

**Charles O. Smith** is now overseer of spinning and carding at White Bros., Inc., East Jaffrey, N. H.

**Olin Holly,** overseer of the cloth room of the Consolidated Textile Corp., Pelham, Ga., has resigned. Mr. Holly is succeeded by **Thomas B. Rector.**

**T. I. Barber** succeeds **J. E. Myers** as overseer of the cloth room of the Eureka Cotton Mill, Chester, S. C.

**Walter Ayers,** an overseer for the Bigelow-Hartford Carpet Co., Clinton, Mass., where he had been employed for 27 years, has resigned and will move to Westboro, Mass.

**T. E. Lattimore** is now second hand in night weaving at the Kershaw (S. C.) Cotton Mills.

**Elgie Bledseare** is now second hand in weaving at the Merrimack Mfg. Co., Huntsville, Ala.

**Joseph Laviolette** has accepted a position as third hand in the spinning room of the Otis Co., Three Rivers, Mass.

**Patrick Birmingham,** 77 years old, has completed 55 years of consecutive service for the Draper Corp., Hopedale, Mass.

**Samuel Thayer,** formerly master mechanic at the Otis Co., Three Rivers, Mass., has been transferred to the company's Greenville, N. H., mill.

**P. D. Barton** has taken the position of loom fixer at the Merrimack Mfg. Co., Huntsville, Ala.

**Raymond Jones** has taken the position of second hand in night spinning at the Connecticut Mill Co., Decatur, Ala.

**G. M. Shearer,** formerly master mechanic at the U. S. Worsted Corp., Lawrence, Mass., has recently accepted a similar position at the Roubaix Mills, Inc., Clinton, Mass.

**Joseph Samuel Pickard,** overseer of the beaming and dressing departments of the Pacific Mills, Lawrence, Mass., has resigned after 45 years of service.

**William Stewart,** formerly finisher with the Maurice Levy Co., Inc., New Rochelle, N. Y., has resigned to accept a similar position with the Onondaga Textile Mills, Inc., New London, Conn.

### COTTON CONSUMPTION AND ACTIVE SPINDLES

**The Bureau of the Census gives the following data in its April report of cotton consumed, on hand, and active cotton spindles. (Cotton in running bales, counting round as half bales, except foreign, which is in 500-pound bales.):**

| | Year | Cotton consumed during — | | Cotton on hand April 30 — | | Cotton spindles active during April (number) |
|---|---|---|---|---|---|---|
| | | April (bales) | 9 months ending April 30 (bales) | In consuming establishments (bales) | In public storage and at compresses (bales) | |
| United States | 1928 | 525,158 | 5,305,671 | 1,507,992 | 2,921,306 | 30,965,404 |
| | 1927 | 618,279 | 5,330,031 | 1,891,137 | 3,669,737 | 32,886,984 |
| Cotton-growing States | 1928 | 396,566 | 3,947,508 | 1,018,738 | 2,668,637 | 17,822,160 |
| | 1927 | 447,127 | 3,846,671 | 1,271,035 | 3,298,083 | 17,670,432 |
| New England States | 1928 | 106,642 | 1,133,394 | 417,922 | 113,289 | 11,785,338 |
| | 1927 | 143,606 | 1,240,804 | 524,742 | 132,056 | 13,759,190 |
| All other States | 1928 | 21,950 | 224,769 | 71,332 | 139,380 | 1,357,906 |
| | 1927 | 27,546 | 242,556 | 95,360 | 239,598 | 1,457,362 |
| INCLUDED ABOVE | | | | | | |
| Egyptian Cotton | 1928 | 16,448 | 174,435 | 46,976 | 26,405 | ..... |
| | 1927 | 19,527 | 170,223 | 52,612 | 17,366 | ..... |
| Other foreign Cotton | 1928 | 6,445 | 59,600 | 32,775 | 11,861 | ..... |
| | 1927 | 5,892 | 50,066 | 15,556 | 10,860 | ..... |
| Am.-Egyptian Cotton | 1928 | 1,154 | 12,651 | 4,935 | 4,094 | ..... |
| | 1927 | 1,739 | 15,527 | 5,219 | 2,698 | ..... |
| NOT INCLUDED ABOVE | | | | | | |
| Linters | 1928 | 57,513 | 568,872 | 222,374 | 63,400 | ..... |
| | 1927 | 67,745 | 594,168 | 230,487 | 71,360 | ..... |

## Cotton Week in Halifax County, N. C.

Cotton week was observed last week by both girls and women's clubs of Halifax county, North Carolina. Clubs at Dawson, Roseneath, Darlington, Ringwood, Calvary and Garner each had interesting programs.

Speeches, songs, fashion shows, exhibitions of cotton dresses made by members, and awarding of prizes featured the sessions.

In addition to county prizes, local ones were offered and they created additional interest. Miss Hazel Wheeler, home demonstration agent, was in charge of the exhibitions.

## Higher Prices Awaited by Wool Growers

PENDLETON, ORE.—Wool growers of Umatilla County are said to be holding about a million pounds of unsold wool. The offers on contract before shearing have been turned down, it is stated, the growers expecting higher prices from the eastern markets.

# Controlling Hydrogen-Ion Concentration in Wet Processes of Wool Manufacturing

## *Many Possible Applications of pH Control Factor from Wool Pulling to the Dyeing and Finishing*

*By Chas. E. Mullin**

(*Continued from issue of April 28, 1928, page 45*)

WHILE on the subject of acid treatments of wool, we may as well complete it. As previously stated, on the acid side of the theoretical neutral point of water, that is, below pH 7.0, the injury to wool becomes less and less until the isoelectric point (pH 4.8) of the fiber is reached. But as the hydrogen-ion concentration of the solution increases beyond this point (that is, the pH drops below 4.8) the amount of acid combining chemically with the wool increases also just as in the case of the alkali. For this reason it is essential, both from the standpoint of uniform results and minimum of injury to the stock, to control the hydrogen-ion concentration of the acid bath also.

### Acid Carbonizing

Sulphuric acid baths are commonly used upon wool in carbonizing, mordanting, and dyeing, as well as sometimes in fulling. Probably the most concentrated acid bath commonly used upon wool is that employed in carbonizing by the sulphuric acid process. While the concentration of the carbonizing bath is usually less than 6% sulphuric acid, on the weight of the bath not on the weight of wool, cases have been known where the concentration ran up to 10%. In starting up a fresh sulphuric-acid carbonizing bath, many plants use about a 4% sulphuric-acid solution, depending somewhat upon the character of the stock to be carbonized and the nature of the vegetable matter, burrs, etc., present.

Theoretically, a 4% solution of pure sulphuric acid in pure water is ionized to the extent of about 54.5% and has a pH of about 0.37 or 0.38. Very probably, the bath as made up in the mill will seldom reach quite this hydrogen-ion concentration, due to impurities in both the technical grade of acid and the water used, which may act as buffers to some slight extent, etc., but the pH will not be so very far from this figure. Obviously such a high hydrogen-ion concentration is going to have a considerable action upon the fiber.

Just as in the case of the alkaline solution, the higher the hydrogen-ion concentration of the carbonizing bath above (or the lower the pH below) pH 4.8, the more wool will be dissolved into the bath and the more acid will combine chemically with the wool passing through the bath, aside from the acid present in the solution adhering to the stock, and be carried to the dryer and carbonizer to be further concentrated in and upon the stock. Yet this acid in the wool itself has no beneficial effect even to the carbonizing action. Only that acid present in and upon the vegetable matter itself assists the operation in any way whatsoever.

As wool is amphoteric, it is an excellent buffer, and by the combined buffering and neutralizing action of the wool substance dissolved by the carbonizing bath, the impurities and alkalies present in the stock, and the ash removed from the wool, the ionization of the 4% sulphuric acid carbonizing solution is soon more or less retarded and the hydrogen-ion concentration of the bath reduced somewhat; i. e., the pH increased. This, of course, results in less injury to the stock, both in the acid bath and in the carbonizer.

### Old Baths

As time goes on with the old acid carbonizing bath in use, the pH of the bath is gradually reduced, even though more acid is actually present, and it is eventually necessary to increase the specific gravity (Twaddle or Baume), which is the usual crude mill-control method, of the bath to a higher degree in order to obtain a proper and complete carbonization of the vegetable matter present. Eventually this specific gravity may reach a point as high as, or even higher than, Sp. Gr. 1.09 (12° Be), and yet the actual acid present, nor the hydrogen-ion concentration, may never again reach the point of the pH 0.37 of the fresh carbonizing bath.

While the usual control method for wool carbonizing baths is simply the hydrometer, reading either in specific gravity, Baume or Twaddle degrees, some few mills do supplement this to some extent by volumetric titration of the scouring bath from time to time. However, it is probable that no plant is at the present time even endeavoring to control the pH of the carbonizing bath to any degree whatsoever. The principal reason for this is that it has never been done before and therefore there is no demand for it. It is interesting to note, however, that many of the finest wools are handled by the aluminum chloride process, where the pH undoubtedly with even the crudest control, never reaches as low a value as in a fresh sulphuric-acid carbonizing bath.

While many of the old and practical men in the carbonizing industry may scoff at the idea of pH control and its importance for good work, it may be pointed out that these same men will seldom pass a fine white lot of high-grade stock through the fresh 4° Be. carbonizing bath willingly. Yet there are a number of ways by which the pH of the carbonizing bath can be controlled to any desired degree, and the fresh bath made just as safe, or even better, than an old or dirty bath.

### Aluminum Processing

The aluminum-chloride method of carbonizing is often called aluminum processing. When carbonizing by this method, the control of pH is just as important as in any other process—and probably even more so, as it is often very difficult to obtain even results on all lots, or even on the same lot. As the aluminum-carbonized stock is supposed to be neutral when packed, but never actually is neutral, these variations in acidity are very likely to, and in fact often do, cause more or less trouble in the subsequent handling of the wool. However, there are other causes for this besides variations in the pH of the aluminum-chloride bath.

In carbonizing by the aluminum-chloride process, the stock is usually given a thorough scouring before it enters the aluminum bath. As the amount of alkali combining with the wool, aside from that present in the water present on and in the fibers, varies with the pH of the scouring bath and especially with the pH of the last scouring bowl before the wool enters the aluminum bath, the hydrogen-ion concentration of the aluminum-chloride bath is constantly decreasing (pH increasing) after each addition of reagent. Therefore, it is desirable to control, among other things, the pH of this scouring operation.

Due to the hydrolysis of aluminum chloride, the pH of aqueous solutions of the normal chloride, $AlCl_3$, is always on the acid side of, or below pH 7.0. However, due to the alkali carried into the bath by the wool entering it, the pH of the bath may rise slightly above pH 7.0 or even sufficiently high to cause the formation of a colloidal precipitate of aluminum hydroxide in the carbonizing bath. This colloidal precipitate is immediately filtered out of the bath by the wool passing through it, and, unless the stock is dusted more than usual, may result in dusty stock.

Further, as the amount of acid actually combining with the wool in the carbonizing bath is a function of

> ***"ALTHOUGH chemical research," recently wrote Dr. W. M. Scott,† "is responsible for working out methods for the determination and control of the hydrogen-ion concentrations of solutions, the actual operations are so simple that the practical mill man will have no difficulty in carrying them out. The determination is usually accomplished either by the electrometric or colorimetric methods.***
>
> ***"The electrical method is based upon the use of the unknown solution as an electric cell and ascertaining the voltage which is set up by this cell. This voltage can be correlated with the hydrogen-ion concentration of the solution.***
>
> ***"The colorimetric analysis is based on the use of a number of colored organic chemicals called indicators, which exhibit different colors in solutions of different hydrogen-ion concentrations. The most suitable indicators are those having an effective range of about 1½ pH units, and it is possible to choose a certain number of these indicators which will cover the whole pH scale from about 0.2 to 13.6 pH. The method of analysis consists in adding a definite quantity of indicator to the unknown solution and comparing the color of this solution with the colors of equal volumes of standard buffer solutions whose pH values are already known.***
>
> ***"The possible applications of hydrogen-ion analysis and control in the textile industry are very numerous. In fact every process of manufacture which involves the use of solutions will probably benefit from a better understanding of the pH factors which are involved."***

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† In *Dyestuffs*, the house organ of the National Aniline & Chemical Co., Inc., March, 1928.

the pH of the bath, among other things, the higher the hydrogen-ion concentration (or the lower the pH) of the carbonizing bath, the more acid will be in actual combination with the fiber when it leaves the bath and passes into the dryer or carbonizer.

### Acidity of Processed Stock

Free hydrochloric acid is volatile and so is that attached to aluminum as aluminum chloride, and all of this acid is supposed to be volatilized in the carbonizer, due to the high temperature maintained therein. However, this volatilization is never 100% in actual practice, and the result is that the aluminum-processed stock is always more or less acid to methyl orange. In other words, there is sufficient acid always present in the stock to give a pH of less than 5.0 in 20 parts of water to one part of wool. Frequently considerably more than this amount of acid is present.

As the normal aluminum chloride itself does not have any affinity for the wool fiber, the amount of aluminum chloride carried out by the wool is largely controlled by the concentration of the bath and the amount of the solution carried out of the bath by the wool mechanically. Therefore, pH does not affect this factor greatly. But the hydrochloric acid combined with the wool fiber itself, which varies with the pH of the carbonizing bath, is not free and therefore it is not volatile, or at least it does not appear to be as volatile as the acid attached to the aluminum. The result is that as the pH of the aluminum-carbonizing bath varies, so too does the amount of acid combining with and remaining in the stock after the carbonizing treatment. This further adds to the variation in the acidity of the carbonized stock.

Many persons connected with the wool industry believe that aluminum-carbonized or processed wool is neutralized at some stage of the treatment; but this is almost never done, and, when it is called for in commission carbonizing, an extra neutralizing charge is made, just as in the sulphuric-acid-carbonizing process. Therefore, as the pH of the aluminum-chloride bath is one of the main factors in controlling the acidity of the finished stock, it is very essential for uniform work that this variable be controlled by the addition of the requisite amount of hydrochloric acid, alkali, or alumina to the aluminum-chloride bath as required.

### Gas Carbonizing

Gas carbonizing, with hydrochloric-acid gas, has been practiced for many years upon rags, shoddy, etc. The hydrochloric-acid gas is usually generated by dropping concentrated hydrochloric acid upon hot plates or bricks. This gas is passed through a rotary tumbler, probably somewhat resembling a tubular rotary continuous cement kiln, counter-current to the stock being carbonized. More recently this principle has been successfully applied to the carbonization of wool and noils. While it is impossible to apply pH control to the gas used in the carbonization, very probably the amount of hydrochloric acid combining with and remaining in the wool may vary somewhat with the amount of moisture present with it in the tumbler. Therefore, a pH titration of the acid present in the stock after carbonizing may be a very valuable control measure.

### pH in Dyeing

In dyeing wool, the concentration of acid almost never exceeds, say, 10% on the weight of the wool in a 20 to 1 bath; in other words, a solution containing about 0.5% of sulphuric acid upon the weight of the bath. In this case the theoretical ionization of the acid in pure water would probably be about 64 or 65% and the hydrogen-ion concentration of the solution about pH 1.19. This corresponds to about a 0.1 normal sulphuric-acid volumetric solution. With only 5% of acid in a 20 to 1 bath, the hydrogen-ion concentration of the acid bath would be, theoretically, about pH 1.48. However, in dyeing, due to the presence of the sodium sulphate, dyestuff, and wool, the hydrogen-ion concentration would probably never reach these figures.

It is a well-recognized fact that the more acid present in the wool acid dyebath, the greater the affinity of the wool for the acid dyestuff. This is undoubtedly at least largely due to the opening up of new linkages, bonds, or affinities in the keratin (wool) molecule by the mineral acid as the hydrogen-ion concentration increases. Therefore, the importance of pH in dyeing. While probably very few, if any, dyers are making an attempt to control the pH of the dyebath in wool dyeing at present, this is no indication that it is not of value, and that this additional control method may not eventually be adopted by the best dyers.

No dyer would attempt to dye uniformly matched shades upon wool in any form without any control whatsoever of the temperature, or the time factor. Yet he does it every day without control of the other principal factor, hydrogen-ion concentration. pH control is just another added refinement of the process, and without doubt, with proper time-temperature control mechanism and the application of pH control, a good dyer will be an even better dyer. He will be able to dye quicker, match his shades closer and easier, and with less injury to the stock, all of which means more and better production, and less waste of dyestuff.

A few years ago pH control was not employed commercially in any industry, including leather and water softening, but today it is widely used in many industries, tanning and water softening included. Many dyers object to its application to textiles, saying that it is not possible or practical on account of the variations in the different lots of wool. Well, wool is no more variable than the hides from which it was taken, or than river water. Yet pH control has been and is extremely successful in these latter fields, and so will it be in wool dyeing, as well as most other textile processes, when one mill successfully adapts it and, through better work, forces it upon its competitors.

### Mordanting

Just as pH is important in dyeing so is it important in mordanting wool or silk, whether it be bottom, top, or metachrome mordanting. Frequently it is somewhat difficult to obtain a close match with the mordant colors. Very probably in many cases this may be at least in part due to variations in the pH at which the dyeing and mordanting take place, when the other factors are under careful control. It is well known that in all mordanting of wool the amount of chrome taken up by the fiber is largely controlled by the acidity or alkalinity of the bath, with temperature and time. Temperature and time are already under easy control, and with pH control it will undoubtedly be much easier to obtain exactly uniform and controlled conditions, and therefore better and quicker matches in dyeing.

In metachrome dyeing pH control should be particularly desirable as it is often more or less difficult to obtain absolutely uniform results by this method in every case, as regards fastness, crocking, shade, etc. By control of the three factors it should be possible to come very close to obtaining uniform results in most cases, as the speed at which both the dye and mordant are taken up by the fiber are under complete control.

### Vat Dyes on Wool

The application of the vat dyes to wool has not received as much attention in America as it deserves, especially when its usefulness for light shades fast to light upon wool is considered. While the mordant colors as a class are about all that is necessary for dark shades upon suitings, etc., when they are applied in light shades, the light-fastness of the resulting mordant colors often leaves much to be desired. This is undoubtedly the reason why so many of the lighter shades of goods are obtained by mixing dyed raw stocks or yarns with white or undyed stocks, etc., to obtain light browns, light grays, etc. The vat dyes offer an interesting field here.

The application of the vat dyes to cotton was for many years considered quite a trick by many dyers, and still is by some, but the best dyers usually experience little difficultly in applying the vat dyes to cotton. However, their application to wool is almost unknown upon a commercial scale in America. Yet it can be done, and is being done in Europe. But to do it successfully requires a very close control of the pH of the application vat. As a class, the indigoid vats are more suitable to wool than the anthraquinones for two reasons: first, they have a greater affinity for the wool fiber; and, second, they do not require as high pH to hold them in solution.

In starting experiments along this line, it is best to select those vat dyestuffs which are applicable cold—that is, at room temperature—and which require the least amount of alkali. The pH at which the vat dyestuff begins to precipitate should then be determined; and from these factors, along with the fastness data, the proper dyestuff may be selected. While the vat dyestuffs are comparatively high in price, the fact that they can be applied cold and that they are mostly used only for light shades, at least partly offsets this drawback. Another advantage is that the long boiling in the acid-mordanting bath, as in applying the mordant colors, is avoided so that the stock is less harsh and may be spun to considerably finer counts, in most cases, than the mordant dyed stocks.

In applying the vats to wool, they are reduced in the usual manner, at any desired pH and temperature, in the reduction vat. The dye vat is then prepared in the usual manner, the reduced dyestuff added, and the pH of the dye vat adjusted to the desired point, not too close to the point of precipitation, by the addition of suitable buffers, organic acids, etc. The use of glue or glucose in the dyebath is generally advantageous, both as a protective agent for the wool and as a protective colloid to keep the dyestuff in solution. Stearic acid, oleic acid, and other soap-forming acids have recently been suggested as suitable for use in adjusting the pH of the bath, as well as the phenols, cresol, etc.

### Bleaching Wool and Silk

In the peroxide bleaching of wool and silk, no matter what chemicals are used—i. e., hydrogen peroxide, sodium peroxide, barium peroxide, etc.—it is very important to control the pH of the bath in order to obtain the best and most economical results. For a given concentration of peroxide in the bath, the speed of decomposition or bleaching will depend upon the pH of the bath and the temperature. These, together with the concentration of the bath and the time it is allowed to act, in the absence of unusual factors such as catalytic agents, etc., control the extent of the bleach upon the goods. The same may also be said to apply to the bleaching of almost all other materials, including cotton.

As the decomposition of the peroxide is hastened by both high pH and high temperature, these may be interchanged to some extent in bleaching; but, if the decomposition is too rapid, some of the peroxide is wasted due to the loss of nascent oxygen from the bath. Usually it is desirable to start the bleach at the highest pH to be used during the process, which varies somewhat with the character of the stock, etc., as also does the temperature used. For the finest and best wools, a low temperature is generally used, say 38 to 49° C. (100 to 120° F.), but this is often increased to 65° C. (150° F.) for coarser wools.

As the bleaching proceeds, the wool gradually takes up alkali from the bath so as to come into equilibrium with the solution, thus gradually lowering the pH of the bleach bath. For this reason it is practically impossible to regulate the speed of the reaction without pH control. By starting with a known peroxide con-

centration and controlling the pH and temperature of the bath, it is possible to duplicate the results in most bleaching operations very closely in the shortest possible time and with the least possible injury to the wool or silk.

Undoubtedly there are also many other places in the wool industry in which pH control would be advantageous, from the standpoint of either uniformity, economy, or efficiency. The foregoing merely attempts to point out the most obvious of these. The next paper will cover application of pH control to silk industry.

# Soap for Wool Scouring

## *Comparison of Liquid-Fat Soaps with Solid-Fat Soaps*

***From Procter & Gamble Bulletin****

WE have a number of characteristics by which we can determine the value of a soap for the scouring of wool. These are as follows: (1) High degree of solubility, (2) high degree of rinsibility, (3) the ability to form a stable fatty acid emulsion on acidification, (4) low degree of hydrolysis, (5) low degree of preferential absorption, and (6) reasonable stability toward oxidation and rancidity.

### Extreme Soaps as Standards

The common soap stocks are made up of mixtures of liquid and solid fatty acids. If we take a soap made from 100% liquid fatty acids, and compare it, according to the above scale, with a soap made from 100% solid fatty acids, we shall have data which will enable us to judge any soap which is made from a *mixture* of liquid and solid fatty acids. Knowing then, the value of a liquid fatty acid soap as compared with a solid fatty acid soap, all that will be necessary to evaluate a soap will be to determine from the fat characteristics (titre, iodine value, and saponification value) the percentage of liquid and solid fatty constituents. The final judgment will be influenced by color, odor, and tendency toward rancidity, but a fair estimate of the general characteristics of the soap will be obtained from this relation of liquid and solid fatty acids. Examples will be given later in this bulletin.

In comparing two soaps made from 100% liquid and solid fatty acids respectively, we shall take for the former the most common liquid fatty acid, known as "oleic acid," and for the latter the most common solid fatty acid, known as "stearic acid." Oleic acid forms on saponification with sodium hydroxide, a soap technically known as *sodium oleate*. Stearic acid forms a soap called *sodium stearate*. These two soaps are really primary soaps, and by comparing them according to the standards we have established, we shall be able to judge accurately any soap which is made from a mixture of solid and liquid fatty acids.

### Degree of Solubility

(1) *Degree of Solubility.*

Throughout the range of temperature and concentration employed in the processing of wool there is a wide difference between the solubilities of sodium oleate and sodium stearate. The former soap dissolves readily in the cold, while to dissolve the latter it is necessary to bring the bath practically to the boil. Obviously it will take more time and steam to dissolve a solid-fat soap than a liquid-fat soap.

Recent production of a soap in a thin dry flake having approximately the composition of sodium oleate makes possible the use of this extremely soluble type of soap by direct addition to the piece goods machine. A chip soap with a titre of 14 or lower will dissolve rapidly in almost any bath in which there is even moderate agitation. Such a procedure eliminates preliminary boiling into solution and effects a worth-while saving in time and steam.

The difference in solubility becomes apparent when the two soaps are allowed to cool. The solutions of the oleate are liquid at room temperature in concentrations as high as 20%, whereas solutions of the stearate as low as ½% form a gel. The solubility of the oleate makes possible the use of stock solutions containing a pound or more to the gallon. In order to maintain a stock solution of a soap high in solid fatty acids, steam must be kept on the tank at all times. Since the common method of heating is by means of an open coil, this continued steaming results in a dilution of the solution and uncertainty as to the concentration at any given time. From the standpoint of solubility it is evident that soaps made from stocks high in liquid fatty acids have a decided advantage.

### Degree of Rinsibility

(2) *Degree of Rinsibility.*

Investigation of comparative rinsibility of sodium oleate and sodium stearate in relation to the wool fiber has shown that the oleate has a marked superiority over the stearate. The higher-titre soap is tremendously handicapped by its poor solubility and its decided tendency toward preferential absorption, and precipitation of fatty acid on the fiber. Interpreting these results in relation to plant practice, the advantage of the lower titre-soap is very apparent. Rinsing in the plant is often performed under adverse conditions of low temperature and insufficient water. Moreover, if the goods are permitted to dry somewhat between operations, some parts of the fabric will invariably dry out more than others. Because of this unequal drying, soap will concentrate in spots. The makeshift rinse before dyeing, known as "wetting out," must not only lower the concentration of the soap in the damp portions, but must dissolve the dry soap. In order to free the fiber from soap under these adverse conditions, a high degree of rinsibility is essential.

The solubility of sodium oleate is such that soaps containing a high percentage of this constituent have a factor of safety which cannot be expected of soaps made from stocks high in solid fatty acids. And so, in the matter of rinsibility, too, we find a tremendous advantage in soaps made from liquid fatty acids.

### Stable Fatty Acid Emulsions

(3) *The Ability to Form Stable Fatty Acid Emulsions in the Presence of Acids.*

The reaction that takes place when an acid is added to soap may be represented as follows:

Soap+Acid equals Fatty Acid+Salt

A fatty acid has some of the characteristics common to oils. Like most oils, it is lighter than water and when formed in a soap solution it would be expected to rise to the surface as an oily film. In this respect we notice a peculiar difference between sodium oleate and sodium stearate. The stearate behaves exactly as we expect. Fatty acid quickly gathers into a mass and rises to the surface as a greasy layer, sticking to whatever it touches. The oleate, however, forms on acidification what is known as an *emulsion*. In this condition the fatty acid does not collect but remains in finely divided particles, in which state it does not adhere to the fabric. Each minute globule of fatty acid is separated from the next by a film of water and the tendency to adhere is lost. This difference in the behavior of the two soaps in the presence of acids is of tremendous significance in the processing of wool.

In many instances the soaping is followed by an acid bath as, for instance, an acid dyebath or an acid mordanting bath. If rinsing has not been thorough, the goods will contain a certain amount of soap which will unite with the acid to form fatty acid. As stated above, the physical state which this fatty acid assumes determines to a large degree whether it will interfere with the dyeing, or cause oil spots. If this fatty acid gathers together into an oil layer, unevenness and spots are likely to occur. If, however, the fatty acid remains in an emulsified state, it will not adhere to the fiber or interfere with the dyeing.

Milk and butter illustrate this point well. If milk is spilled on a fabric, it can be readily rinsed out in water. Butter, however, requires scouring or a solvent for removal when smeared on a fabric. The only difference between the butter fat in the milk and the butter itself is the physical condition. The fat in the milk is so finely divided it cannot adhere, whereas in the butter it is gathered together in a mass and behaves as any such fat or oil. This simple example illustrates, perhaps in slightly exaggerated manner, the difference in behavior between the fatty acids liberated from liquid- and solid-fat soaps.

This tendency of a liquid-fat soap to form a stable fatty-acid emulsion when acidified is decidedly favorable to good scouring. It has the advantage that when soaping is followed by an acid bath the rinsing has a factor of safety. If rinsing has not been complete, the soap in coming in contact with the acid is automatically transformed into a harmless emulsion rather than a sticky grease. This factor of safety is not present in soaps containing a large percentage of solid fatty acids. Such soaps must be rinsed very thoroughly, or the fatty acid liberated in the acid bath will cause trouble.

### Low Degree of Hydrolysis

(4) *Low Degree of Hydrolysis.*

Comparing the alkalinity resulting from hydrolysis of oleate and stearate soaps in the concentrations and temperatures employed in wool scouring, it is found that the oleate produces a bath much lower in alkalinity. The low-titre soap thus gives a scoured fiber which retains all its natural softness and luster. The stearate, on the other hand, hydrolyzes to a greater extent and yields more of the reactive alkali, which tends to weaken and harshen the wool fiber.

Through a similar action in the scouring of dyed yarn, experiments under identical conditions have proved that soap made from oleic acid is much safer for the dyestuff than the stearate. Dyed samples of wool soaked under conditions similar to those in a scouring bath were bled to a notably greater extent when stearate was used.

For greater safety, then, to the fiber and the dye which it carries, the use of a soap low in titre—one which hydrolyzes but slightly—is imperative.

### Preferential Absorption

(5) *Degree of Preferential Absorption.*

The tendency of soaps to react chemically with wools is largely controlled by the extent to which they hydrolyze and yield free alkali. The absorption of the released alkali by the wool, with subsequent ill effects, was discussed under the last heading. As a consequence of such absorption, which may continue to a great degree, the fatty acid of a soap is liberated and actually precipitated in the bath. The difference between high and low-titre soaps in this respect can be plainly shown by a very simple experiment. Immerse two like samples of wool yarn or cloth in glass containers with about ½% solutions of sodium oleate and sodium stearate respectively. Allow to stand at a temperature of 120°F. for ½ hour. Examination at the end of this period will show the oleate solution still clear, or perhaps very slightly cloudy, while the stearate solution will have become quite opaque, due solely to the aforementioned precipitation of fatty acids.

Further proof can be obtained by chemical examination of the soaked

* One of a series of bulletins on the relation of soap to various textile processes.

wool, which will show the presence on the fiber of considerably more stearic acid in the one case than of oleic acid in the other. It is not merely that the high-titre soap hydrolyzes more and thereby produces this deposit; but that the fatty acid resulting from such a soap is not as easily emulsified as one made from oleic acid, and consequently the former has a greater tendency to adhere to the fiber.

Such experiments illustrate convincingly the superiority of oleate soap for wool scouring.

### Oxidation and Rancidity

(6) *Stability toward Oxidation and Rancidity.*

Studies of rancidity have shown that soaps which oxidize and become rancid quickly are those made from fats containing a large percentage of what is technically known as "unsaturated constituents." There are various degrees of unsaturation. Stearic acid for example, is completely saturated. The partially unsaturated series is represented by oleic acid. The series of which linolic acid is a typical example may be termed highly unsaturated and are known as "drying oils." This means that sodium oleate will become rancid somewhat more readily than stearic acid, but not nearly as readily as soaps made from stocks containing large percentages of linolic acid, such as corn or cottonseed oils.

We find, however, that sodium oleate, or soaps consisting largely of this compound, are, under ordinary conditions (i. e., with no prolonged ageing under moist, warm conditions), sufficiently stable to give entirely satisfactory results. But when the degree of unsaturation is appreciably greater than that existing in sodium oleate the increased tendency to oxidize and become rancid may cause serious trouble.

Although in analyzing soap the iodine number is a partial measure of the degree of unsaturation, it cannot be depended upon alone. Combination with the titre will usually give a decisive answer. For example, the iodine number of commerical oleic acid is between 90 and 100. Any soap showing a higher figure may be classed offhand as containing too great a percentage of highly unsaturated acids. But by blending with saturated acids, a highly unsaturated acid may be used for soap without giving an unduly high iodine number. The tendency to rancidify, however, remains. In such cases the titre test will probably betray the blending, because of the higher titre imparted by the saturated acid. In general it may be said that a soap with an iodine number of 90 to 100 and a titre of 14 degrees or less can only be made from high-grade oleic acid. And such a soap will have all the advantages of this stock.

### Survey of the Comparison

In summarizing the relative advantages of solid- and liquid-fat soaps, it immediately becomes apparent that for the processing of wool the sodium oleate or liquid-fat soap has a marked superiority over the sodium stearate or solid-fat soap. In general, it may be said that the higher the percentage of liquid fatty acid in the stock from which a soap is made, the more nearly ideal that soap will be for use with wool. Such a soap will furnish a large factor of safety against troubles arising from improper use.

The measure of the percentage of liquid fatty constituents of a soap is shown in the soap analysis under the item "titre." Titre is defined as the temperature in degrees Centigrade at which the melted fatty acids solidify. The higher the percentage of liquid fatty acids, the lower the titre.

Conversely, the higher the titre, in general, the higher the percentage of solid fatty acids. It follows then, *that the lower the titre, the more satisfactory a soap is for scouring wool.*

### The Alkali Portion

Old prejudices favoring soaps are giving way to the modern viewpoint based on scientific facts. Tests have been made in our laboratories and in others in an effort to learn the facts regarding the claims for the superiority of potash soaps. While the detailed reports of these experiments will be reserved for a later bulletin, it can be stated here that in no case thus far investigated has it been possible to show any better results with a potash soap than with the soda soap of the same fatty acid.

### Summary of Evaluation

In summarizing the foregoing discussion of efficient soaps for wool scouring, these facts are outstanding:

1. The characteristics of a *neutral* soap (properly manufactured so that it contains no free fat or caustic) are dependent on the characteristics of the fats from which the soap is made. The properties of these fats in turn depend upon the proportion of liquid and solid fatty acids which they contain. By comparing a soap made from 100% liquid fat with one made from 100% solid fat we have obtained data by which we can determine the efficiency of any soap.

2. The characteristics most desirable in a soap for wool processing are as follows: (a) high degree of solubility, (b) high degree of rinsibility, (c) ability to form a stable fatty acid emulsion in the presence of acids to give an added factor of safety when an acid bath is to follow, (d) low degree of hydrolysis, (e) low degree of preferential absorption, and (f) stability towards oxidation and rancidity.

3. Comparing the liquid-fat soap with the solid-fat soap in respect to the above standards, we find that the liquid-fat soap possesses a marked superiority over the solid-fat soap in all respects except the tendency to become rancid. If, however, this tendency is no greater than that of sodium oleate, as measured by an iodine number of about 95, the soap will be stable enough for practical purposes.

The data obtained through extensive research, together with practical investigation in the industry, point toward sodium oleate as the ideal soap for the processing of wool. The closer the composition of a soap approaches that of sodium oleate, the more nearly ideal that soap will prove to be for the scouring of wool.

In a soap analysis, the item called titre is a measure of liquid fatty acids. In general, the lower the titre, the higher the percentage of sodium oleate in the soap and the more satisfactory the soap will be for the woolen mill.

# After-Effects of Alkali in Wool

## *Alkali Always Absorbed in Scouring — Many Faults Due to It*

*By A. T. King**

THERE is—as my colleague, Mr. Barritt, has observed—a distinct difference in the nitrogen content of wool after a normal commercial scour. Any such modification through alkali must produce a corresponding effect on textile properties, particularly dyeing affinity, even though no effect on the physical appearance of the fiber may be apparent.

This has scarcely been the view of the practical man, for, I think, two reasons: first, because exact chemical knowledge has not been an essential in manufacture; and secondly, and in consequence, because the mechanism and effects of alkali sorption have not been adequately appreciated. Some practical men have, indeed, been more awake to the harmful possibilities in alkali than others. (I am not referring, of course, to drastic treatment with alkali—there has long been the crude knowledge as to damage ensuing from unduly akaline treatment—but to quantities with the ordinary limits of trade practice.) They have used only guaranteed neutral soap, confident that since no actual alkali came near the wool, there could be no alkali left in it.

### Alkali Effect Always Present

As I am dealing with effects of residual alkali in wool, I want it to be quite clear to all of us, even at the risk of laboring the obvious, that to scour wool without alkali simultaneously affecting it is an impossibility. Thus a neutral soap solution is no safeguard against alkali absorption, as investigators have shown. This action is common to all detergents, whether soaps, carbonates, silicates, or borates, which contain soda or potash as their base. For this reason even raw wool is slightly akaline through absorption from the natural potash soaps present in the wool suint. In all cases it is caustic soda (or potash) which has gone into the wool, despite the fact that no caustic soda as such was actually applied, and which is responsible for the after-effects to which I shall refer. Naturally the stronger the detergent, the higher the temperature, and the longer the period of contact, the greater will be the extent of this absorption. Also the nature of this absorption is such that hours or even days of washing off will not reduce the amount to negligible proportions. It is thus clear that a very careful study is desirable of the possible influences of small and apparently innocuous amounts of akali such as inevitably remain in wool after normal scouring.

Some have found the scouring of indicator yarn and cloth a valuable object lesson in exhibiting the ready absorption of alkali, and its very incomplete removal in washing-off. By this means we have been able to demonstrate the existence of uneven alkalinity, due to a variety of causes, some more or less obvious, such as uneven application of scouring agents, uneven washing off, wringing, siping, and crabbing, and the more elusive but quite simply explained cause of alkali migration, as I have termed it, which is due to continuous capillary flow of liquid in moist material carrying alkali with it to the more exposed parts where evaporation takes place more freely, and where alkali in consequence becomes more concentrated. This is especially prone to occur in scoured pieces cuttled down damp, and in water-conditioned yarn on bobbins or cheeses.

Brom Thymol Blue Indicator materials show sensitively variations in alkali content. This method has demonstrated how, even with the most careful scouring and washing-off of material, it is extremely difficult to leave it absolutely level as regards alkali content.

I may mention here in passing that recently ammonium chloride has been recommended for getting scoured material neutral; also ammonium sulphate for removing alkali from fabric containing acetate silk prior to finishing, as acetate silk is very liable to be tendered by steaming in the presence of alkali. It is therefore well to state that rapid removal of residual alkali by means of ammonium salts, preferably the sulphate, was recommended in a paper by Mr. Hirst and myself in 1924, and that a number have applied it successfully in the elimination of faults due to uneven alkalinity. It must not be inferred, however, that subsequent removal of alkali in this way can undo any mischief caused while the alkali was present. It is only a safeguard against troubles which might otherwise be developed by the alkali, were it allowed to remain, and it is quite wrong to suppose that unduly alkaline washing does not matter so long as the alkali is subsequently eliminated.

### After-Effects

I have spent some time over the cause of alkalinity in wool, its uneven distribution, and the method of locating it, because it is a necessary preliminary to a clear statement of the after-effects. We have worked from these principles, and ascertained by

* Of the British Research Association for the Woolen and Worsted Industries. Article from the *Journal of the Textile Institute.*

# WHERE QUALITY Is Built In—

*The Comb Circle and Faller Finishing Department of the R. H. Hood Company Plant*

THE efficient planning of the R. H. Hood Company Plant, the variety of its equipment, and the skill of its men combine in building quality into every Hood product. The glass wall shown in the above picture of the Comb Finishing Department gives full daylight for careful work on minute details.

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laboratory investigation the various effects to which the sorbed alkali can give rise. We have been able to demonstrate how alkali sorption takes place in actual practice, and how it can come to be unevenly distributed, with uneven after-effects, and thus have been able to correlate numerous erst-while mysterious faults—which have evoked various but unsatisfying speculations as to their origin—with their true origin in uneven alkalinity.

To mention these after-effects briefly, the increased yellowing of wool when heated, or steamed, in proportion to the amount of alkali present in it at the time is, I think, well known. Also the more alkaline the material the greater is its affinity for dyestuffs generally, after heating or steaming. Recently Mr. Hirst has observed that even with wool of uniform alkalinity, uneven heating gives rise to subsequent uneven dyeing, the over-heated portions dyeing lighter in shade. Despite the subsequent elimination of the alkali from wool which has been heated or steamed, the modified dyeing affinity persists as the result not of residual alkali, but of actual modification of the wool substance itself. Once this degenerative process has been started, the wool becomes less resistant to after-processing generally, i. e., to carbonizing, bleaching, and chlorinating, again in proportion to the amount of sorbed alkali originally present.

Dyestuffs which are reasonably fast to washing when dyed on sound wool, are often loose to washing on wool which has suffered through over-alkaline treatment, and there is reason to believe are less fast to light also. Again, with regard to conditions favorable to bacterial attack, not only would such degenerated wool appear more susceptible, but, with relatively sound wool, damage occurs, within limits, in proportion to the amount of alkali actually present, and fiber strength and dyeing affinity are proportionately affected.

Such facts as the foregoing indicate what faults might occur, supposing alkali were unevenly present. Short of actual proof, however, of how the latter would occur in practice, or eventually develop, one could only speculate as to the identification of faulty results with alkali. This is where the method of indicator controls has proved its value by actually locating the distribution of alkali in manufacturing operations, and thereby proving the coincidence of manufacturing defects with the results obtained under known conditions in the laboratory.

### The Sulphur Dioxide Fault

I do not suppose the end has yet been reached in the tracing of faults for which alkali is directly or indirectly responsible. There is indeed a temptation, having found so many, to blame it undeservedly. I have recently been investigating a peculiar type of dyeing fault, which again proves to be dependent on the presence of alkali, though in this case the latter is rather the scapegoat than the actual offender, which is the dyestuff itself. It may be termed the sulphur dioxide fault, and I wish to include a brief account of it, as having been diagnosed through a recognition of the influence of alkali, and as incidentally involving a considerable modification of accepted ideas regarding fastness to stoving.

The problem arose with a knitted garment, dyed orange, with bands of stoved white yarn. Yellow angular patches had developed on the orange ground after the garment had been parceled up. I hazarded the suggestion that it might be due to sulphur dioxide from the stoved yarn, but the dyer replied that this at any rate could be ruled out, as the dyestuffs were fast to stoving. Yet sulphur dioxide proved to be the cause.

The principal dyestuff concerned, Orange II, is of good fastness to the standard stoving test, but along with a number of other azo dyestuffs of similar constitution, is remarkably sensitive under certain conditions. This sensitivity is due to their conversion by sulphur dioxide in the presence of certain limiting amounts of alkali, into a stable derivative (azo-sulphite) of the dyestuff, which is usually strikingly different in color from the original dye. Thus yellow dyes give much paler yellow derivatives, red give orange-yellow, scarlet yellow-red, and blue give more reddish products; changes, in fact, more or less in the same direction as color changes in fading.

The key to this apparent discrepancy between the stoving test and effect in the garment was given by graphing the effect of alkali in promoting the conversion of a dyestuff solution into its azo sulphite. The effect of sulphur dioxide upon the dyestuffs when dyed on wool follows substantially the same variation with varying alkali content of the wool. Thus the fastness of Orange II to the standard test is easily explained. The pattern is finished acid. Wringing out of soap solution is insufficient to neutralize the acid, let alone to allow alkali to take its place, and the test is made over the inactive range. In the case of the garment, sulphur dioxide is being gradually absorbed from the stoved yarn into the scoured alkaline orange yarn. The conditions giving the maximum sensitivity are achieved during this slow absorption, and the dye goes completely off-shade. That is the bare outline of this fault. A little reflection will show how far-reaching this effect can be.

# "Fool-Proof" Dyehouse Methods*

## *A System for Preventing Off-Shades in Small Dyeing Plants*

*By W. R. Smith†*

THOSE of us who dye to live are beginning to realize that making a living dyeing is getting to be quite a problem these days. The writer of this article has been dyeing to make a living for 35 years, and during that time has seen the dyeing industry, particularly the systems of dyeing, make progress from the very crudest methods of open-tub dyeing to these later-day machine-dyeing systems which we find in all up-to-date plants.

Some of these systems have been discussed at previous meetings of this organization by men more learned and able than the writer. The subjects discussed have been both technical and practical. Some of the technical subjects discussed have been so very technical that only the small number of those chemically initiated have been able to enjoy them. The more practical subjects have been enjoyed by the larger number of our members, of course, because they were more understandable.

Into which class this article will be placed the writer does not know. To give it a name, we have headed it "Some Fool-Proof Dyehouse Methods," and we are inclined to the opinion that after you hear it read, the first half of the hyphenated word "fool-proof" will be used by some to designate its class.

You see we are careful to admit this before we begin because we may be made to admit it after we get through.

There is nothing technical in this article. No chemical terms are used herein. The writer is not of that school. What little dyehouse knowledge he may have, he gained in the school of dyehouse experience wherein the bucket and the dipper, and many times the shovel, were the implements used to "weigh out" dyestuff.

In days long gone by, when the shade on warps was very close and it required only a very, very small amount of dye to doctor it, the boss usually told me to get a "pinhead" of Safranine, or a "pinhead" of Benzo. as the case might be, and if that pinhead of dye did not get the right shade, I was usually the "Pinhead." But these were antiquated methods which would not be tolerated in any up-to-date dyehouse today.

Dyeing in recent years has become quite a complicated problem. With the ever-increasing demand on the colorist for new shades in women's hosiery, men's fancy socks, and the light and delicate shades in rayon, celanese, and other fancy material, the colorist has to be very proficient and expert to meet the requirements. Most of these later-day dyehouses require different sized monel-metal machines, delicate weighing scales, and a college educated chemist with laboratory experience in order to get successful results. As most of the dye manufacturers furnish formulas with their dyes, it does not require much skill to dye the original shade—the skill is required in keeping the shades uniform from one batch to another.

It is very interesting to go into different dyehouses and see the various methods used by the dyers to keep their shades uniform, and of course these different methods determine whether a particular dyer is a good or a poor one. Of course there are no poor dyers, all are good but some better than others.

### Uniform Shades

It is a well-known fact that sometimes a difference in shade can be caused by something over which the dyer has no control, such as buying yarns from different sources. We have seen a lot of stockings dyed in the same bath come out different shades due to the fact that different yarns were used in the knitting of the stockings—all the same number of yarn of course, but some with a very slightly different spinning twist.

But with the yarns uniform in twist and with the dyeing made from the same barrel of dye (or can, nowadays) you would naturally think the dyer would have his shades run absolutely uniform from one batch to another without any doctoring whatever. But, sad to relate, as most dyers know, this state of perfection has never yet been attained. Lack of perfection in a dye is usually caused by mechanical and not chemical defects.

There are a number of things that enter into making "off shades." In making most of these delicate shades, of course, very little dyestuff is used, the dyer having to weigh grains instead of pounds and ounces. With so little dyestuff being weighed, a slight down-weight on the scales one time against an up-weight the next time will make a variation in the shade. Then a dampness in the dyehouse might cause some of the dye to stick to the weighing paper. Then again, the wind might blow away particles of dye dust before the prescription is dissolved. Then again, leaving the cover off a barrel or keg of dye sometimes allows dampness to get into the dyestuff, which will surely cause a difference in shade when the amount of dyestuff to be weighed is so slight.

These are trivial things, but it is the little things in the dyehouse that throw the most perfect system out of whack, and the more complicated the system the more liability to get off-shades. Therefore the simpler or more "fool-proof" the system is the less liable it is to go wrong, which leads us to the point of this article.

### A Fool-Proof Dyehouse

In an average-sized hosiery mill in eastern Tennessee, they have a dyehouse system that is almost absolutely foolproof. This mill dyes about 30 shades which remain standard with them for at least one season. Knowing what it takes to dye 100 lbs. of hose, the dyer weighs out enough dye to dye that 100 lbs., which he dissolves in a large bottle and then increases this to 100 liquid ounces, giving him 1 oz. of this solution to dye one pound of material. It is very seldom he has to dye 100 lbs., the demands of the trade being

(*Continued on page* 47)

* Paper Presented at Greensboro Meeting of A. A. T. C. C.

† Southern Representative, United Chemical Products Corp.

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# Effectiveness of Materials Used for Waterproofing Canvas, and Their Influence on the Fabric

## *Investigations by the Bureau of Chemistry and Soils, U. S. Department of Agriculture*

*By T. D. Jarrell and H. P. Holman**

*In the accompanying article the following questions concerning the waterproofing of canvas are answered:*

1. *What need is there for waterproofing canvas?*
2. *How does waterproofing affect the durability of canvas?*
3. *What are the cheapest and best waterproofing materials?*
4. *What objections are there to the use of paraffin?*
5. *How may bituminous materials be applied?*
6. *What are the best treatments for paulins?*
7. *What are the best treatments for light-weight tent fabrics?*
8. *What is needed particularly for awning materials?*
9. *How can treated canvas be tested for water-resistance?*

PROBABLY the best way to present the results of investigations on the waterproofing of canvas by the Bureau of Chemistry and Soils of the U. S. Department of Agriculture is not by giving a chronological review of our activities, but by answering as briefly and simply as possible a number of questions that might be asked. In answering these questions our opinions are based upon experimental results and experience.

*Question 1.—What need is there for waterproofing canvas?*

For many purposes canvas does not need to be waterproofed. Canvas used primarily for sun-shading purposes in the form of awnings, canopies, porch curtains, and umbrellas, and even some tents, need not be waterproofed. In fact, most of the common waterproofing treatments would be objectionable, since they add weight to the fabric and accumulate dirt. However, where canvas is used primarily for the purpose of keeping things dry, it should be waterproofed. This applies to paulins and covers of all kinds, particularly those used in contact with the things that are covered. Closely woven, untreated duck sheds water very well when new, but we have found that the water-shedding property of untreated duck is soon lost on exposure to the weather and that it soon becomes very absorbent. It becomes saturated with water in a rain, and the water runs upon objects touching the underside, and even drops through where the duck is flat or baggy.

### Effect on Durability

*Question 2.—How does waterproofing affect the durability of canvas?*

Unquestionably waterproofing increases the serviceability of canvas, but it does not always increase durability. In fact, waterproofed canvas may last for a much shorter time than untreated canvas. In a series of experiments to determine the effect of various waterproofing materials upon cotton duck we found that all oily, greasy, or waxy waterproofing materials which we tried, except some bituminous materials, increased the rate of deterioration in strength on exposure to the weather. It has always been claimed that linseed oil rots fabrics, and it was thought the reason lay in the oxygen-absorbing property of such oil. We found, however, that substances like petrolatum and paraffin, which have very little, if any, oxygen-absorbing properties and which are generally believed to be inert chemically, caused even more rapid deterioration than linseed oil.

In a series of experiments on yarn we included a commercial drying oil treatment. The directions for using this treatment cautioned against the addition of burnt umber on the ground that it would cause rotting of the canvas. In order to see just how severe this rotting effect might be, we used some of the treating material with the addition of burnt umber and found that this pigment instead of rotting the yarn had a decided protective effect. This fact, and also the fact that the bituminous materials caused no deterioration, strengthen the theory that the deterioration may be caused by sunlight and is retarded by materials which color the fabric and absorb the sun's rays. Cellulose fibers in the absence of other materials are known to be injuriously affected by sunlight. Whether certain waterproofing materials make cellulose even more sensitive to the injurious rays, or whether these materials promote oxidation by ozonizing the air under the influence of sunlight, has not yet been determined.

Results were obtained in an extensive series of experiments on canvas which showed that the deterioration on exposure was always less when pigments were used than when the same waterproofing treatments were used without pigments.

It may be of interest to review briefly some of the outstanding results of this investigation.

### Effect of Pigments

Twelve-ounce gray standard army duck was used. All exposures were conducted for six months. The treatments consisted of paraffin, beeswax, raw and boiled linseed oil, mixtures of petrolatum and beeswax, mixtures of petrolatum and asphalt, mixtures of wool grease and asphalt, and many similar materials, dissolved in an organic solvent. These materials were applied to one side of the canvas with a paint brush. All these treatments, free from pigments, after exposure gave a tensile strength lower than that of the untreated canvas after exposure, and some of them were much lower. However, when mineral pigments were incorporated with these waterproofing materials and then applied to the canvas in the same way and exposed to the weather, the deteriorating effect was materially less in every instance. Many of the pigments caused much less deterioration in the strength of the canvas than was suffered by the exposed untreated canvas. A few typical results might be mentioned.

The untreated duck lost 39% of its strength after being exposed to the weather for six months. Another piece of the same cloth treated with yellow petrolatum, 85%, and beeswax, 15%, lost 90% of its strength. This treatment decreased the strength of the cloth but 23% when raw sienna was added, and but 19% when burnt umber was incorporated with it. The canvas treated with boiled linseed oil and exposed for the same time lost 65% of its strength. When burnt umber was added to the linseed oil, the deterioration was reduced to 47%; when aluminum bronzing powder and lampblack were added to portions of the same oil, the deterioration was but 18 and 13%, respectively, as compared with 39% for the untreated cloth. The canvas treated with paraffin alone and exposed to the weather for six months lost 81% of its strength.

These results show that the waterproofing mixtures developed by the Bureau of Chemistry and Soils, and containing pigments, such as are commonly used in paints, are effective in conserving the strength of the fabric without reducing water-resistance.

It might be mentioned incidentally that pigmenting treatments were found to be useful for protecting out door fabrics that require no waterproofing treatment. Tobacco shade cloth treated with lead chromate was found to lose only 5% of its strength in one season, whereas untreated cloth lost 47%.*

The protective effect of pigments explains the long life of canvas car roofs and boat decks which are laid upon freshly applied heavy coats of white lead and oil and afterward treated with several coats of paint; it probably explains also the acknowledged fact that mineral-dyed khaki duck outlives gray duck, and that old worn-out awnings are sometimes seen suspended only by the colored stripes.

### Waterproofing Materials

*Question 3.—What are the cheapest and best waterproofing materials?*

Where dark colors and a somewhat greasy finish are not objectionable, the cheapest and best materials for imparting water-resistance by impregnation and coating are undoubtedly bituminous materials. Asphalts, including both natural and petroleum asphalts, are better than pine tar and coal tar and their corresponding pitches which were originally used for making tarpaulins. Air-blown petroleum asphalts are particularly good. Stearin pitch can be blended with asphalts to reduce their susceptibility to temperature changes. Other materials should be blended with the asphalts to increase flexibility and penetration. One of the best and cheapest materials for this purpose is amorphous mineral wax, a kind of petroleum grease. It is a by-product that is separated from chilled cylinder oil stocks by centrifugal machines and resembles unrefined petrolatum in appearance and properties, but has a somewhat higher melting point and greater viscosity. Petrolatum (vaseline) and neutral wool grease are also cheap materials that can be used with asphalts to produce a flexible finish.

For light-colored finishes a mixture of beeswax with petrolatum or amorphous mineral wax in the ratio of about 1 to 4 is good. Beeswax is one of the best waterproofing materials, but, besides being expensive, it is too hard and brittle to use alone except in very light treatments.

For canvas in a fixed position and where porosity to air is not necessary, treatments with drying oils like linseed oil, tung oil, and perilla oil or with drying oil combined with fish oil or other semi-drying oil, are satisfactory. Such treating materials are, however, more expensive than those previously mentioned.

As already stated, it is advisable to incorporate pigments with all waterproofing treatments for canvas that is to be exposed to the weather continuously or frequently. White or light-colored pigments can be used with light-colored treatments, but they are not suitable for use with bituminous materials. As a rule, the dark-colored pigments are more effective in pro-

* Chemical and Technological Research. Paper presented before the Sixteenth Annual Convention of the National Tent and Awning Manufacturers' Association, Long Beach, New York.

* TEXTILE WORLD, 71, (May 7, 1927), p. 2949.

# *After* BARGAIN DAY..WASH DAY *after* WASH DAY *what?*

EVEN a nine-day wonder is longer lived than many a bargain-day profit.

On wash day the customer's beautiful illusion that she found a bargain fades like a rainbow. But the merchant's illusion that he made a profit unfortunately continues like the pot of gold to lure him on to still "bigger and better bargains."

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tecting fabrics from injury by light. Lampblack is one of the best pigments for use with drying oils where a dark heat-absorbing treatment is not objectionable, because it keeps the treating material from becoming hard and brittle. Zinc oxide is not a suitable pigment for use with drying oils, because it produces a very stiff coating.

Paraffin is one of the cheapest waterproofing materials, but it cannot be included with the best.

### Use of Paraffin

*Question 4.—What objections are there to the use of paraffin?*

Although paraffin has high water-resistance, it is not a suitable material for waterproofing canvas, for various reasons. Probably the most serious objection to paraffin is that at moderate and low temperatures it is a brittle solid having a crystalline structure. This causes the paraffin in and on the fibers to crack on folding, allowing water to enter, and when the treatment is heavy the stiffening effect of the treatment may cause the fibers or the entire fabric to break on bending. Even when paraffin is blended with petrolatum or other softeners, it separates in crystal form at low temperatures. We have found that paraffin dissolved in mineral spirits in a closed container will crystallize out of the solution when exposed to the cold, whereas a more concentrated solution of amorphous mineral wax in mineral spirits shows no tendency whatever to crystallize, even at lower temperatures. Other objections to paraffin as a waterproofing material for canvas are that it readily softens in warm weather; it causes rapid loss in strength on exposure to sunlight; and it actually increases susceptibility to mildew when conditons are favorable.

### Applying Bituminous Materials

*Question 5—How may bituminous materials be applied?*

Such treatment may be applied in solution with mineral spirits, using about two pounds per gallon. When coal tar or coal-tar pitch is used in place of petroleum asphalt or natural asphalt, coal-tar naphtha must be used as a solvent instead of mineral spirits.

While experimenting with treatments containing asphalt and petrolatum, we found that when the solutions were applied to one side of canvas, with many samples, the side receiving the treatment was much darker than the other side. When, however, wool grease was combined with the same asphalt, the treating material, although applied only to one side, was uniformly distributed and both sides looked practically alike.

Bituminous mixtures can be prepared in emulsified form, and it is probable that such emulsions can be used in applying heavy surface coatings to canvas. It is doubtful, however, if the fabric can be as thoroughly impregnated as when the materials are applied in solution.

### Treatments for Paulins

*Question 6.—What are the best treatments for paulins?*

During the World War numerous samples of waterproof canvas for paulins submitted by the War Department were tested for water-resistance. The greater number of those showing both a high initial water-resistance and high water-resistance after weather-exposure had been treated with bituminous mixtures. In a study of the water-resistance of treated canvas during continuous exposure to weather for one year, it was found that out of 18 laboratory treatments, most of which contained amorphous mineral wax in combination with other water-proofing materials, the two best treatments, giving identical results, were as follows:

| | |
|---|---|
| Amorphous mineral wax..... | 65% |
| Lead oleate ..... | 20% |
| Beeswax ..... | 15% |
| and | |
| Petroleum asphalt ..... | 60% |
| Wool grease ..... | 25% |
| Lead oleate ..... | 15% |

The three next best treatments were mixtures containing Bermudez asphalt to the extent of 15%. They were entirely satisfactory from a practical standpoint.

In the formulas just given the lead oleate was added as a mildew-proofing agent, but its effectiveness for this purpose, as judged from other experiments, is doubtful. Lead oleate was found, however, to increase materially the waterproofing qualities of mixtures in which it was used.

With the purpose of supplying farmers and others with formulas that require only generally available materials, the Bureau has recommended that one of the following two formulas be used for waterproofing paulins:

*Formula I*

| | |
|---|---|
| Petrolatum ..... | 8½ lbs. |
| Beeswax ..... | 1½ lbs. |
| Earth pigments..... | 5 lbs. |
| Mineral spirits..... | 5 gals. |

*Formula II*

| | |
|---|---|
| Petroleum asphalt..... | 7½ lbs. |
| Petrolatum ..... | 2½ lbs. |
| Lampblack ..... | 1 lb. |
| Mineral spirits ..... | 5 gals. |

When mineral spirits is not available, a mixture of 3 gallons of gasoline and 2 gallons of kerosene will serve the same purpose.

Canvas treated according to the first formula will be colored buff, khaki, drab, red, or brown, depending upon what particular earth pigment is selected. Other colored pigments or white pigments can also be used. For some purposes, Formula I will be preferable to Formula II, because canvas treated with the latter will absorb more heat from sunlight, owing to its black color.

### Light-Weight Tent Fabrics

*Question 7.—What are the best treatments for light-weight tent fabrics?*

Up to the present the Bureau has devoted most of its attention to waterproofing treatment for paulins and other heavy and medium-weight covers and has done little with light-weight fabrics.

Chemical treatments, resulting in the disposition of basic aluminum acetate and aluminum soap on the fiber, are, we believe, suitable for fabrics that are not much exposed to the weather. We have found, however, that the water-resistance of fabrics treated with basic aluminum acetate and aluminum soap rapidly diminishes on continued exposure. We have not found that such treatments promote deterioration of the fabric by sunlight.

Another chemical treatment that is suitable for light-weight fabrics consists in the deposition on the fiber of water-repellent compounds of the rare-earth elements. This treatment is used commercially and is protected by patents.

A simple method of imparting water-repellency to light-weight fabrics that are not exposed to sunlight for long periods is to impregnate them with a dilute solution of beeswax in a suitable solvent, such as turpentine or carbon tetrachloride. From one-half to one pound to the gallon of solvent is sufficient for this purpose. Treatment with beeswax not only gives higher water-resistance after continued exposure, but also causes less deterioration in strength than treatment with paraffin.

When there is no objection to materially increasing weight and no necessity for porosity to air, drying oil or a mixture of drying and semi-drying oil diluted with a thinner and containing suitable pigments can be used on light-weight fabrics.

### Particular Needs

*Question 8.—What is needed particularly for awning materials?*

As stated before, we do not believe that waterproofing is necessary for awning materials, generally speaking. Mildewproofing treatments are advisable for awnings used in damp climates. Treatments for protecting awnings from injury by sunlight are highly desirable. Dyeing properly with mineral khaki undoubtedly increases their resistance both to mildew and sunlight. Awnings made of canvas dyed with mineral khaki, and properly cared for have been known to last for ten or eleven seasons. It is likely that the commercial practice, recently introduced, of pigmenting awning duck on the outside with solid colors such as chrome orange and green, increases its durability. A tent and awning maker in Washington was asked if greater durability was claimed for awnings made of pigmented duck. He said that people wanted them simply because they were fashionable, not because they were claimed to be more durable. He had never heard of such claims. He said that treatments for increasing durability were not needed; that awnings are replaced frequently, not because they are worn out, but because they are soiled and unsightly.

It was his belief that what is needed for awning materials is a treatment that will prevent soiling. Up to the present time we have not devised such a treatment. We believe that a treatment which will cement the individual surface fibers to each other, without making the fabric too stiff, and which will not be soft or tacky, might prove satisfactory. Perhaps certain dopes or varnishes in diluted form can be combined with pigmenting treatment to accomplish this purpose. It is possible that duck which has been heavily treated with cuprammonium solution and afterwards decolorized with suitable chemicals (dilute acetic acid or potassium cyanide) would resist soiling, but this would be an expensive treatment. Moreover, the use of the extremely poisonous cyanide solution would be very hazardous.

### Testing for Water-Resistance

*Question 9.—How can treated canvas be tested for water-resistance?*

In its work on the development of durable waterproofing treatments for canvas, the Bureau of Chemistry and Soils found it necessary first to have a practical and simple laboratory method by which the effectiveness and probable durability of the waterproofing treatment could be judged. After considering and experimenting with the numerous procedures that had been proposed, it was believed that the funnel test properly standardized was more simple in operation than any other method and furnished as much, if not more, information on the effectiveness of the waterproofing treatment. The method, briefly described, is as follows:

A piece of the cloth 12 in. square is crumpled in the hand, soaked in water of room temperature for about 24 hours, dried another 24 hours at about 110° F., then hung up in the room for a short time. It is then placed on a piece of absorbent paper (paper toweling) of the same size, and the two are folded together into the form of an inverted cone. It is then placed in a six-inch glass funnel which is supported over a graduated glass cylinder. The funnel is filled to a maximum depth of exactly four inches with water at room temperature, and allowed to stand for six hours.

The water resistance of canvas as determined by this procedure is rated as follows:

*Very high*—If the paper under the fabric remains dry, except for slight wetting where folded.

*Good*—If the paper becomes wet, but no water drips through.

*Medium*—If one-tenth or less of the water drips through.

*Poor*—If more than one-tenth of the water drips through.

It is not claimed that this test or any other known laboratory test when applied to new treated canvas is an infallible indication of how the canvas will withstand rain after continued exposure to the weather. In fact, it has been found that some treated and unexposed canvas will show a very high rating by this test when new, but after exposure to the weather for some time its water-resistant properties will be greatly diminished. This method, however, is valuable in distinguishing a good initial water-resistant canvas from a poor one.

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| Glauber's Salt | Sodium Sulphide |
| Naphthalene | Sodium Sulpho Cyanide |
| Oxalic Acid | Sodium Stannate |
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# QUESTIONS AND ANSWERS

***Service on Mill Problems and Correspondence With Readers***

## Selvage Is Lighter Than Body of Cloth

Technical Editor:

Enclosed I am sending you two swatches of cloth, one pink and one white. I would ask you to examine the edges on these two samples and give me your opinion as to why they do not come up in color equal to the body of the goods. (6460)

The two fabrics submitted are pure-dye crepe de chine, one a medium light pink and the other white. An examination of the pink sample shows that the color of the selvage, concerning which inquiry is made, is of a lighter shade than the body of the cloth, and has a slightly yellowish cast. My opinion is that the cause of the trouble arises from undue heat in the steel roll of the calender, accompanied by extra pressure. It is a well-known fact that under excessive heat many colors, particularly the lighter shades, will fade off considerably. In the case before me the selvage (the warp of which is made of organzine, while the warp in the body of the cloth is of raw silk, as is usual in such fabrics) is substantially heavier, or thicker, than the body of the cloth. Consequently, under the conditions stated, the pressure of the hot roll on the selvage will be greater than on the rest of the fabric on account of this thickness, and thus the color of the selvage has been faded off to a greater degree.

That this is the fact is borne out by the appearance of the selvage in the white sample. In this the selvage is of a distinctly yellowish tone, almost approaching the appearance of having been scorched; a condition which could have been created by no other influence than that of excessive heat. In addition to the fading off of the edge in the pink sample, this excessive heating, approaching scorching, would account for the yellowish tone of the selvage in that sample.

I would suggest that the inquirer have some examination of his goods made at the finishers, both before the calendering and after it. It may be that the heated calender roll at the time of such inspection may neither be too hot nor the pressure too great. It is in that process, however, that the discoloration, as I see it, must have originated.

JAMES CHITTICK.

* * *

## Finishing Damask

Technical Editor:

Enclosed please find samples of a figured cloth we are making. We are unable to get the proper finish for same. We want plenty of gloss on it; in fact, gloss is the most important thing our buyers want. Could you give me my information on this matter; or better, one or two finishes that will give this gloss? What machines are the goods passed through? On the calender which side is next to the steel bowls? (6465)

The usual method of finishing this class of material is to pass the goods through a two-roll starch mangle, using a small amount of gum tragasol, with the addition of a little soluble tallow or softening oil, to keep the finish of the goods mellow and soft to the handle and yet allow the finish to have a full body.

The mangle should be run in connection with a dryer of standard cylinder construction, such as is used in bleacheries, and a short tenter to even up the width. The size of the dryer and the length of the tenter would depend upon the production required in yards per working day.

At the end of the tenter the goods should be wound up on a batching apparatus and then should be slightly conditioned with water.

Undoubtedly the best type of calender to give a full gloss without schreinering would be a 7-roll machine, with four steam-heated chilled iron rolls and three cotton rolls. The face of the goods should come in contact with the face of the chilled iron roll in order to obtain maximum polish or gloss. In running these goods through a calender of the above type, however, it would be necessary to either paste seams or use a special type of seam which would not mark the roll.

Machinery of the type specified above can be operated to give a production in 10 hrs. of approximately 25,000 lbs.

* * *

## Scouring Worsted Knitting Yarn

Technical Editor:

In scouring 125 lbs. of 2/30s worsted knitting yarn, what percentage of soap and soda do you use, based on the amount of yarn? How long a time is required for scouring and rinsing? Any general notes that you have on this subject will be appreciated. (6456)

The percentage of soap and soda is best determined after you have established in a practical way a good formula for scouring your yarn. Without knowing the size of your machine we suggest first making up a good scouring soap. It is always advisable to use the best grade of soap for yarn scouring. Make up a stock solution, say 200 gals., with 5 ozs. soap and 2 ozs. sal soda per gallon. This would be 62 lbs. of soap and 25 lbs. of sal soda. Cook the soap in one-third the amount of water, then bring up to the 200 gal. mark. After cooling, the soap is ready for use.

For your requirements, start with three pailfuls of soap. The temperature should be 110 to 120° F., no higher. The idea is to obtain a good lather, and the amount of soap used can be regulated to give this. You can easily figure the percentage used, based on the weight of the yarn, after you get the results you are after.

The time of scouring will depend on the condition of the yarn. Usually one-half to three-quarters of an hour in the soap is sufficient. Rinsing usually requires 45 min. Be sure to have a good supply of warm water at 110 to 120° F. for rinsing. After the warm rinse, finish off with cold water. It is very important that your supply of water be free from lime and magnesium salts, etc. Hard water is very detrimental in scouring woolen and worsted goods.

* * *

## Paraffin Finish on Thread

Technical Editor:

Will you kindly inform us, if possible, what a "parafon" or "parathon" finish on thread is. (6467)

We have never heard of a "parafon" or "parathon" finish, and presume the inquirer refers to a paraffin finish. This can be obtained by using a mixture made up as follows:

10 gals. water
5 lbs. paraffin wax
1¼ lbs. sal soda
14 ozs. chip soap

Boil up water with sal soda added, then add the soap, and finally add the wax in small amounts until the solution is completed. Use as needed. Several trials will be necessary to determine the quantity to use on any particular goods being finished.

**TEXTILE WORLD,**
**334 Fourth Avenue,**
**New York City.**

**Gentlemen.—We appreciate very much your letter of March 14 enclosing letter from _____ with reference to _____.**

**This is just the sort of information that we wanted, and we appreciate your getting it for us.**

**Yours very truly,**
**READ HOSIERY MILLS.**
**(Signed) Sims Read.**

## Difference Between Two Batches of Wool Yarn

Technical Editor:

We are mailing you two bobbins of white wool yarn. The darker bobbin is marked "old" and the one with lighter wood is marked "new." These bobbins represent two different batches of yarn which go into the same cloth. We are having some argument as to just what the difference is between these two batches. Will you give us your opinion as to whether there is any difference in stock or twist, and if not what causes this difference? (6462)

Both yarns have been made from blends. The one marked "old" is the better yarn, the blend used averaging finer in our estimation than the sample marked "new." The difference in shade is still evident after the yarns have been scoured. Analysis of the stock in the two yarns proved that the "new" lot had a shorter staple, contained more of the coarser quality, kemps were in evidence, and the amount of short fiber seemed to indicate the presence of noil in the blend. To verify the analysis we tested the yarns for run, turns per inch, and breaking strength. The results of the tests are as follows:

| | *Old* | *New* |
|---|---|---|
| Run | 3.6 | 3.5 |
| Turns per inch | 9.42 | 8.5 |
| Breaking strength (single strand) | 301 gms. 10.62 ozs. | 270 gms. 9.53 ozs. |

The above results represent averages of tests. We do not consider the "new" lot a fair duplicate of the "old" lot and would expect the results in the finishing to support our claim.

* * *

## Rayon Embroidery Yarn

Technical Editor:

I am quite interested in the article entitled "Rayon Rope, an Embroidery Yarn," in the March 17 issue, which discusses twisting rayon on cotton machines. I have spun both 3-thread, 3-ply crochet, 7½ turns by 7½ turns, and your rope type, if I am not mistaken, is like 10/2 or 10/3, about 2½ by 2½ turns. I am thoroughly familiar with cotton machinery but I have no machines of my own to experiment with. Would appreciate any information you can give from your experience on the spindle speed, size of traveler and ring, name of machine, weight of bobbin on the spindle when full and empty, etc. Information on 150-denier, 3/3 is preferred. Weights on the above in the rough will be sufficient. Any other help you may think of will be appreciated (6459)

The author of the article referred to replies as follows: In reply to the correspondent's inquiry regarding rayon rope, would say that the 150-denier rayon is equivalent to about 35s single cotton yarn, and with 20 strands the finished product would be approximately equal to 1.75 single cotton yarn.

The turns per inch for the first twisting process may be from 4 to 5,

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In this department, we undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.

For prompt service, technical inquiries should be sent directly to the Technical Editor, TEXTILE WORLD, 65 Franklin St., Boston, Mass.

# Let's analyze the Analysis

"88% real soap," says the analysis. That's important for you to know, of course, for analysis is the only sound basis upon which soap can be bought. The 88% tells you how much of the product you buy will actually do the work.

But the analysis doesn't say a word about the ingredients that make up that active soap material. It doesn't tell you how carefully they have been selected or how skilfully they have been blended. It doesn't assure you that these ingredients are best for your p articular purposes or needs.

The vast resources of The Procter & Gamble Company, their years of soap-making experience and their reputation for producing good soaps, assure you products whose value can never be shown by an analysis alone. You can best determine their effectiveness and their economy by comparing their results with those of other soaps.

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P. & G. PALM FULLING SOAP

Guaranteed Analysis *PLUS* skill and experience.

# Correspondence with Readers—Continued

and for the second process from 3 to 4. The correspondent can easily get all the details regarding size of material, number of ply, and turns for both first and second twisting by purchasing a small skein of the material at any 5 and 10 cent store.

The material may be manufactured on any of the regular twisters. The ring size, naturally, should be large for economical working, say 3 to 4 inches. The spindle speed is, to a certain limit, also a matter of individual choice; but 2,000 r. p. m. will give good results.

The traveler for a ⅝-in. band ring should be about 1,000 grs., and could be taken from the correspondent's stock of heavy travelers, putting on two or three to give the necessary tension.

For a 3-in. ring bobbin with a 6 or 7-in. traverse, the diameter of the empty bobbin would be about 1¼ in., and the full bobbin would go about 2¾ in. There would be approximately 7 to 8 ozs. of material on the bobbin, which would give a yardage for 20-ply, 150-denier material of 640 to 730 yds.

* * *

## Dyeing Cotton Twills

Technical Editor:

I would very much appreciate your opinion on the following: We want to piece dye a 60 in. wide cotton fabric with a little rayon decoration in the warp. These will be a twill construction and weight about 16 oz. to the yard. What would you advise for the most efficient and best results for dyeing and extracting equipment? Would you recommend a wide pad, jigs, or reel dyeing? I am afraid this width pad would not dye evenly across. Would you recommend squeeze rolls or extractors? (6443)

For piece dyeing 60-in. cotton twills with direct colors, it is recommended that both pads and jigs be included in the equipment. Dark shades are best jig dyed, while light and medium shades may be dyed more economically on the pad. To avoid uneven dyeings across the piece (sidesness) it is recommended that a small dye box be employed and that the liquor be fed in by means of a perforated pipe running the width of the dye box; these perforations should not be over one inch apart and should be so drilled that the liquor will not spray directly on to the cloth (to avoid streaking).

There have been introduced recently vacuum extractors which will remove a larger percentage of moisture from the goods than will squeeze rolls with a heavy nip. At the present time the writer has no definite figures as to the relative efficiency of the two methods and cannot state positively, therefore, whether the cost of installing, running, and maintenance of an extractor of this type will offset the saving effected in the subsequent drying.

* * *

## Mending Knitted Fabric

Technical Editor:

Will you kindly inform me of any devices in existence for picking up runners in knitted fabrics. (6433)

The devices generally used for this work in the underwear and outerwear mills are either an ordinary latch knitting needle mounted in a small handle, or an ordinary crochet hook, the size or gauge of which is governed by fineness or coarseness of the fabric. Particulars of a hook that is largely used on hosiery were given in the January 21, 1922, issue of TEXTILE WORLD.

* * *

## The Seriplane Test

Technical Editor:

Enclosed is a copy of a letter recently received by me from one of my reeler friends in Japan. It might make interesting reading.

Sincerely yours,

H. F. HOFER

*The following is the letter which Mr. Hofer so kindly enclosed:*

Dear Mr. Hofer:

There is much talk about the necessity for making raw-silk quality better understood. Everybody is told that American buyers want silk that is found right by the seriplane test. But you know, we have our own method of finding out quality for evenness for every girl in the factory. That is the system which you introduced.

Every girl in the factory can easily understand what we tell them. If they don't believe when we tell them, they can easily find out for themselves whether or not we tell them the truth about bad size. There can never be any difference of opinion about test, which the girls well understand, because the girls make the silk and know better than anybody else what is good and what is bad. The test can only show the same thing to me and the girls. We can never have two opinions.

Still, we have tried the seriplane, because in Yokohama they say silk must be good by the seriplane. But we cannot tell the girls in the factory what silk is bad and what is good, because the girls many times do not agree with me. I can show them a panel and tell them it is very bad and I must take off some pay for bad silk. But the girls, sometimes they agree and sometimes they don't, because they say that with their eyes they can see the skein is not so bad as it appears to my eyes. Then in such a case we ask some other girl who has not made that skein. "What do you think about this skein, is it as good as No. 80 in the seriplane sample?" Sometimes the girl will say it is as good as No. 90; and then we ask another girl, and that girl says it is good for No. 70. Then I do not know if I can take off pay from the girl who has made that skein.

But we cannot always fight the girls, because if I do they may go away and work for somebody that does not punish them for bad work—which is not bad work perhaps, but is bad work only because it may seem to be bad work.

I do not know what to do about this quality matter. If people in Yokohama accept my silk by our own testing manner, we never have any disagreement. If the test is making the silk bad, we can see the same thing as the buyer and naturally we must agree. But if the silk is bad by seriplane how do we know who is right? The buyer never wants to show any silk is better than he paid for, but sometimes he wants it to be poorer so he can send it back or take off allowance. We cannot tell the buyer his eyes are bad and ours are good, because we cannot be an enemy of the buyer.

I do not think we can make quality by the seriplane right for everybody. If we cannot explain to the reeling girls except by eyes what is good or bad, we must always fight—and people do not like to fight so much always.

How is the seriplane working in America? Is it true that in America buyers' eyes and sellers' eyes are always like one man's eyes? Even if the sellers' eyes and buyers' eyes are one eye, can they agree when the price is different? I mean, if the price is lower when getting silk than when buying silk, is the eye of the buyer always the same? Sometimes I think eyes of Japanese men see different things according to whether it is a good buy or it is a bad buy; but that is not good for business and good feeling.

Etc., Etc.

* * *

## Finishing Indigo Blue Discharge Print

Technical Editor:

I am sending a small sample of 32-in. Indigo Blue discharge print to be finished 30 in., and have a full firm feel for export trade. Would appreciate your giving me a formula to produce a feel like the sample has; also to add considerable weight to the fabric. Anything on the approved method of handling this cloth, such as the machinery required, would be welcome. (6445)

A recommendation for a starch formula is

Pearl corn starch....60 lbs.
Dextrine .....50 lbs.
China clay .....40 lbs.
Turkey-red oil (50%).1 gal.
Boil up to make 100 gals. of starch mixture.

The mixture should be cooked 10 min. after it comes to the boil. The writer would be inclined to tint the starch with a little direct blue dyestuff which is very soluble in water, or with bleachers blue. This procedure will cover up the starching as it lies in the goods. For export, it might be well to add two or three fluid ounces of carbolic acid as a preservative and disinfectant.

The range of machinery usually operated for obtaining the above finish is as follows: A 2-roll starch mangle with a top maple roll and a bottom brass roll, followed by a 40-ft. tenter, and about a 30-cylinder drying machine, with a folder, all running in range. From this point the goods should be taken to a 3-roll calender with two combination cotton and husk rolls, and a chilled iron roll in the middle; the calender would run cold for a smoothing and mellowing effect. It is possible to run the calender in direct connection with the finishing range if the inquirer is desirous of working under the most economical methods from the standpoint of labor and production.

The above range would operate comfortably at 60 yds. per minute. If greater production was required, it would be simply a matter of adding more drying cylinders.

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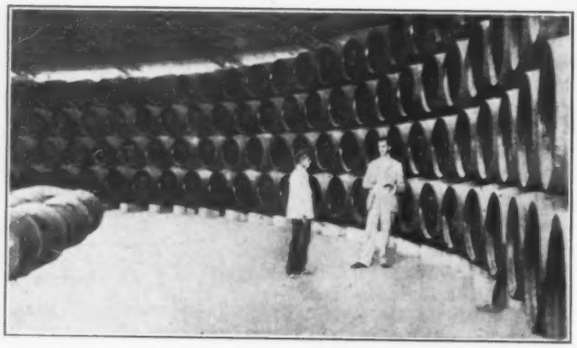
## Fool-Proof Dyehouse Methods

(*Continued from page* 39)

for small lots quickly gotten out. He has small, medium, and large-sized monel-metal dye machines, and no matter what size lot he has to dye, small or otherwise, all he has to do is to weight out so many liquid ounces of the solution for every pound of hose to be dyed. He has it all ready dissolved and can get the batch out quickly. He has his solutions for his different shades in different bottles all ready, and he does not have to weigh out every time he has to dye a lot. His solutions are in such good volume that he is not affected by a down-weight or an up-weight, as he would be if he had to weigh out in grains for every small batch he has to dye. The managers of the mill say they have no trouble with off-shades, no matter what size lot they dye.

I know some dyers will "pooh pooh" this system, but its very simplicity makes it fool-proof, and any chemist knows that when he is working out any new shade in a laboratory he gets a much quicker and more accurate result from solutions than he does stopping to weigh out powders all the time. This fool-proof system is simply taking laboratory methods into the dyehouse, on a larger scale of course. If a new shade is required, it is easier to arrive at that shade from liquid measure than from dry measure, simply by using so many ounces from the different bottles already dissolved. It is not absolutely necessary to keep a different solution for every shade, as any dyer knows that a mixture of so many standard solutions will give the necessary shade. The beauty of this system is that it eliminates all of the possible causes for off-shade enumerated at the beginning of this article.

Then again, the demand for new shades, especially in women's stockings, sometimes catches the hosiery manufacturers with stocks of old shades on hand which they have to work over, usually at a loss. This fool-proof system mentioned above better enables the small manufacturer to keep his stock in the gray, and when he gets a hurry order for a new shade he can very quickly get it off, no matter what size the lot is. Of course, this system could be used only in small and medium-sized hosiery mills, and we find a large number of such mills throughout the South.



# Shiny Crystals from Old Wine Casks

VISIT the storied French province of old Burgundy. Explore its age-honored cellars that store the ruddy wine bearing the same name. Examine its barrel-shaped casks. Rub from their smooth sides the crystals the fermenting wine has deposited there. Crystals, small and flaky. Pink-tinted and scintillating.

Argols, these crystals are called — and they're waiting to help your dye liquors . . . to make them hold fast to the thirsty fibres. For when these sparkling argols are powdered, they become a strong mordant. You know them as our Half Refined Tartar. Always constant, unvarying in their quality. They can't help producing skyscraper results . . . ***inexpensively!***

Will you accept a sample of our Half Refined Tartar? Will you try it in your own dye bath? ***Write us.***

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| Printing Gum C | Printing Gum |
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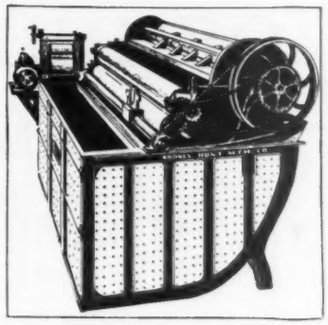
# NEW MACHINERY & PROCESSES

## Oxidizing Machine

### Allows Continuous Bleaching without Hand Plaiting

The Rodney Hunt Machine Co., Orange, Mass., has recently placed on the market an Oxidizing Machine which allows the continuous bleaching of fabrics without the necessity of interrupting the process for plaiting down in the chemic bins. This means that the labor of hand plaiting is saved, and also means that the time occupied between gray goods and white goods is reduced by 12 to 24 hours.



*New Oxidizer*

The Oxidizer, patents for which are pending, bears some resemblance—in general appearance, at least—to the well-known reel machine of the same make. It has a folding or plaiting reel, which is situated near the back of the machine, above the curved guide, and is fitted on front with a pair of tandem rolls, arranged in a vertical position. Immediately in front of the tandem rolls is the so-called "traveling pot eye," which operates on a double screw thread with automatic reverse, so that the eye travels back and forth across the machine at a definite, predetermined rate. The goods are entered into the machine in a single continuous string, passed through the pot eye, around the tandem rolls, and up over the folding reel. The combined action of the traveling pot eye with the folding reel is such as to produce a progressive folding entirely across the machine.

In starting the Oxidizer in the morning, the leading end is brought to the front of the machine, and allowed to stay there until a sufficient yardage is in the machine to give the required length of time for the cloth to come up white. The leading end is then picked up and passed through a pair of squeeze rolls, which extract the surplus chemic and return it to the storage tanks. It will be noted from the illustration that the machine is of the substantial iron-frame type, which means long life and freedom from repairs.

This type of machine is designed to prevent tangling and to avoid subjecting the goods to varying conditions of compression. Uniform results are claimed because of the fact that every yard of fabric entering into the machine is treated like every other yard. The total height which the goods build up is not over three feet, so that the density is practically the same throughout the entire mass. The fabric is open to the air on all sides, and the goods come up white with unusual rapidity. From one-half to three-quarters of an hour is said to be sufficient to bring up the most closely woven fabric made of hard-twisted yarns.

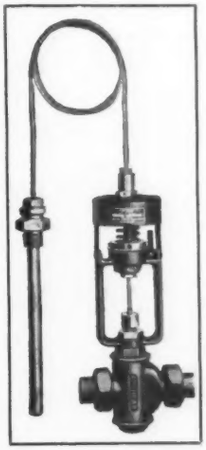
The goods are claimed to be under no strain or pull while in this machine. Tangles and tie ups, which mean heavy strain on the leaving end of the goods as they pull out of the machine, do not occur. The greatest strain that the goods have to stand is to lift their own weight, plus the weight of the chemic they contain, a distance not exceeding five feet.

The machine is of very large capacity, so that reasonably high speeds are obtainable, while retaining sufficient time to bring the goods up white. A wringer is fastened to the machine, and requires no extra installation. This wringer removes excess chemic from the goods as they leave the oxidizer, and is fitted with drip pans to return the chemic to storage tanks. The operation of the machine, the goods in it, and everything about it is constantly visible to the operator. He can see exactly what is going on at all times, and can watch the goods bleach.

## Temperature Controller

### Claimed to Regulate within One Degree Fahrenheit

A new type of temperature controller is announced by the American Schaeffer & Budenberg Corp., 338 Berry Street, Brooklyn, N. Y. It is a self-contained automatic controller of robust simplicity, high sensitiveness, and low cost.



*New Self-Contained Automatic Temperature Controller*

By combining a very flexible bellows of entirely new design with an operating spring of exceptionally large diameter and great length, it is claimed that a mechanism has been secured which can be relied on to hold temperatures constant within very close limits. With favorable conditions it is claimed that regulation can be secured within 1°F. consistently without need of manual attention.

This instrument is made in a number of standard temperature ranges and can be set as desired. The setting point may be adjusted by simply turning a nut, which varies the tension of the valve spring and thus determines the pressure required to expand the bellows. A scale, shown in the picture, enables a given adjustment to be repeated accurately after it has been changed.

Of particular importance is the safety device to guard against damage to the bellows from overpressure caused by accidental overheating. This device is in the form of a spring which is placed between the upper and lower parts of the valve stem. If the pressure in the bellows increases after it has completed its stroke and the valve is seated, this spring will be compressed, thus allowing further expansion. The greatest pressure which can be generated in the system will not damage it.

The precision controller is particularly suited for hot-water service tanks, water heaters, retorts, cookers, and kettles, or wherever a simple controller is required for very close regulation.

## Paper-Box Machine

### Automatically Shapes and Glues in One Operation

A new machine which allows a mill to form its own paper boxes in one operation from blanks supplied by the machine builder has been placed on the market by the Robert Gair Co., 420 Lexington Ave., New York. This company supplies the Gairco blanks, which have double sides and end walls, and four-fold strength at each corner. All printing or lithographing is done on the boxboard itself, which eliminates the necessity for box wraps or labels. When the blank is passed through the machine, it is automatically formed and glued solid.

The machine is readily adjusted for various sizes of box, and extra plungers are furnished to suit the different sizes at a nominal charge. The machine is capable of turning out from 24 to 30 pieces per minute, which is equivalent to 11,520 to 14,400 pieces in eight hours, depending on the size of the box. It weighs 3200 lbs., occupies a floor space of 8 by 5½ ft., and can be operated by any boy or woman of ordinary intelligence.

The machine enables a manufacturer to control his own box manufacture, placing this machine in the packing room and turning out boxes from day to day to meet the demand. Only one machine and one operation are required to set up the boxes. By the use of this box-forming machine, considerable storage space is saved by the mill, inasmuch as the blanks are stored perfectly flat and can be set up by the machine as they are needed. Boxes stored in the flat require only one-tenth the storage space required by set-up boxes of the same dimensions. The floor space saved by the machine has been estimated as a quarter to one-half that ordinarily required for box forming. Since the machines are sold without restrictions, the textile manufacturer is not obliged to use the Gairco blanks, if he desires to purchase blanks from other sources. Knit goods manufacturers who attended the recent Knitting Arts Exhibition in Philadelphia saw this machine in successful operation.

## Rayon-Winder Cup Builder

### Need Not Remove It to Remove Bobbin—Ratchet Thread

The Oswald Lever Co., Inc., Philadelphia, Pa., has recently improved the cup builder of its No. 30 Bottle Bobbin Winder for rayon. As is generally known, the cup touches the wound yarn upon the descent of the traverse in order to raise the yarn guide slightly to make the next traverse a trifle higher. Formerly the cup touched the yarn somewhat above the lowest extent of the traverse, and consequently it extended over the circumference of the wound portion of the bobbin below, necessitating the removal of the cup before the bobbin could be removed. The new cup touches the bobbin at the lowest point of the traverse, making it unnecessary to remove the cup before removing the bobbin.

Another improvement consists in the builder screw having been given a ratchet thread, which permits the cup to slide up the screw. This prevents injury to the cup in case a bobbin that is too large is placed on the spindle.

## Humidor for Knitting-Yarn

### Humidifies Silk on Full-Fashioned or Seamless Machines

At the Knitting Arts Exposition in Philadelphia last month, there was exhibited an interesting device known as the Flexalin Unbreakable Humidor, for humidifying silk thread during operation on full-fashioned or seamless knitting machines. This device was patented on Feb. 7 of this year, although it was placed on the market some months prior to that date. It is manufactured by Bachmann Bros., Inc., 607 Commerce St., Philadelphia, Pa.

The humidor consists of (1) a strong, transparent cylinder of Flexalin, which will not break if dropped on the floor; (2) a base of aluminum for supporting the cylinder and the

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## The most practical way of protecting your batches is the use of this safe and sure new discovery

SILK men told us of ruined batches, of costly errors, and asked us to find a way to avoid them. So we set our famed laboratories to work on the problem. Now we offer you the result. Behind it stand 66 years of soap study—stands the reputation of this world famous name.

Palmolive now offers you an exclusive new olive-oil base soap product for use in your processes. It is called Texolive Kwiksolv. In formula and result it is unique.

As a form of silk insurance it is unparalleled. It will reduce the time and cost element in your work. What water itself will not harm, Texolive Kwiksolv will not affect.

**92%-plus All-Soap — Instantly Soluble**

Texolive Kwiksolv is a low titre (22°) olive oil soap that is instantly soluble. There is practically no danger of skeins breaking, of adhesions. It removes the waxy serecin in the soak so that there will be no trouble when the dyeing process is started.

Even at low temperature Texolive Kwiksolv emulsifies the oil, speeding work and giving most satisfactory results. It is of purest olive oil base—92% plus all-soap.

It contains no deleterious substance to be absorbed by the fibre or cause deterioration.

**Let Your Experts Try This New Way**

Send for an Acquaintance Barrel of Texolive Kwiksolv. Let your experts give it any test they wish. We believe you'll keep a standing order in. Write now.

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BERKELEY KANSAS CITY MILWAUKEE

(3987)

# ADVANTAGES OF HERCULES STEAM-DISTILLED PINE OIL

HERCULES Steam-distilled Pine Oil is an excellent solvent for gums and waxes found in raw fabrics. Its solvent and penetrating properties have been found of great assistance in the bleaching industry.

By means of chemical control Hercules Steam-distilled Pine Oil is made to rigid specifications. We are in a position to supply the textile industry with pine oil of high quality for prompt shipment.

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**973 Market Street**
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# New Machinery and Processes—Continued

*Flexalin Humidor*

cone of yarn inside, and for holding the water; and (3) an aluminum cap containing a hole with or without a porcelain eyelet through which the yarn passes. The top and bottom are constructed to allow the silk to run off easily, and, being of aluminum, are not subject to corrosion.

The bottom contains a lip into which water may be poured as required. This eliminates the necessity of taking the moistener apart for refilling. The bottom and the saucer which supports the bobbin or cone are of one construction, and this affords a smooth surface and permits the silk thread to hang loose over the sides without catching. The top is made in various shapes for governing the amount of moisture required.

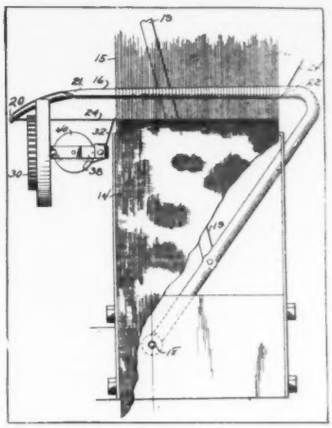
## Weaves Without Shuttles

### Device for Increasing Speed of Narrow Fabric Looms

A United States patent (No. 1,659,728) has just been issued to Frank E. Fowler and William A. Fowler, Athens, Ga., for a high-speed weaving device to replace the shuttle motion of narrow-fabric looms. The device necessitates a double pick in each shed and apparently makes a different selvage on one side than on the other. It perhaps commands attention more as an interesting piece of mechanism than as a valuable addition to the art of weaving. It has not been placed on the market.

In the accompanying illustration, 16 is a needle which enters into and withdraws from the shed made by the warp threads 15, swinging on the pivot 18 and actuated by the connecting rod 19 from the batten of the loom. Filling thread 24 joins the needle at opening 22, slides down to opening 21, where it recrosses to the other side, and finally leaves at opening 20. The filling 24 is prevented from being pulled out of the shed when the needle withdraws by its being wrapped once around selvage thread 32. Thread 32 is fed from spool 40, held in frame 38.

The wrapping of thread 24 once around thread 32 is accomplished as follows: A slot in gear 30 is timed to receive the thread 24 when the needle 16 is at the farthest extent of its motion (the position shown). A revolution of the gear 30, the drive for which is not shown but is quite simple, swings thread 24 completely around thread 32, frame 38, and spool 40; and the needle 16 is then drawn out of the shed, completing the double pick. In order that there may be no obstructions to the swing of thread 24, the frame 38 holding the spool 40 is mounted on the gear 30 and revolves with it. At each double pick, thread



*Needle Weaving Attachment for Narrow Fabric Looms*

32 is drawn slightly into the edge of the webbing, helping to form a selvage.

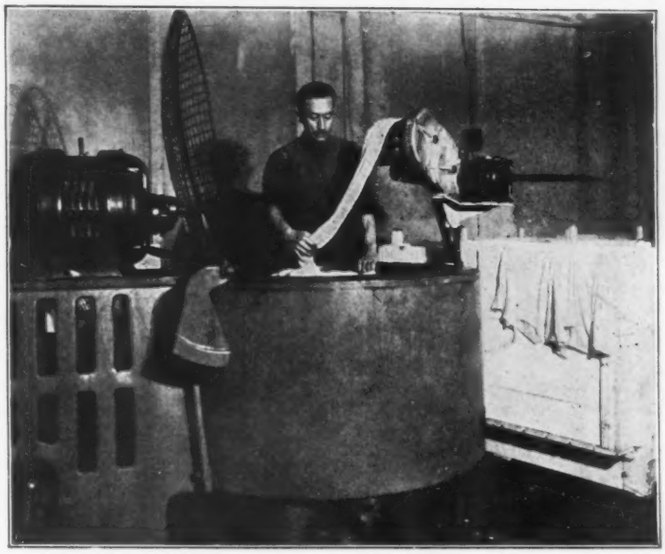
## Loader for Extractors

### Helps to Distribute Knitted Fabric Evenly

A useful attachment for extractors to facilitate the loading and unloading of knitted fabric has been brought out by the Grand Rapids Textile Machinery Co., Grand Rapids, Mich. The loader is mounted on a swivel base which is attached to the edge of the extractor. There are three reels driven by a ¼-hp. motor direct connected through a train of fiber gears enclosed in an aluminum case. All bearings are oilless. A porcelain pot-eye guides the fabric to the reels as it is pulled from a truck or extractor. One end of each reel is open so cloth can be started over them without threading. Cloth may be fed in or out of the extractor by simply swinging the reels around to the position desired. All parts are rust-proof and assembled with a motor on one base.

Using a loader attached to the extractor enables an operator to distribute the fabric in the extractor evenly, prevents much twisting, and does not cause water to drip from above. It is especially recommended for handling rayon, as there is no slipping or chafing of the fabrics.

Several types of bases are made to permit using the loader for other purposes, such as taking cloth out of knitting machine cans and loading into a truck, loading and unloading kiers, etc. It is a portable device and can be lifted from one base to another. The motor is attached to any light socket. The loader is claimed to save time and labor.



*Knitted Fabric Being Fed to Extractor with Aid of New Loader*

## Large Silk or Rayon Cone

### Three-Pound Knitting Cone Has Diameter of 5⅝ Inches

A cone of silk or rayon, known as the "Jumbo" cone, for use in knitting,

*"Jumbo" Cone*

has been developed by the Universal Winding Co., Boston, Mass. It is made unusually large for making exhaustion less rapid, and is so designed in the matter of angles and arrangement of coils that the yarn is delivered from it without variation, stretching, or abrasion.

The Jumbo cone is built on the Universal No. 50 machine, and has a traverse of 5¾ in. The empty cone tube has an average diameter of 2⅞ in., and the outside diameter of a three-pound cone when wound is 5⅝ in. No larger cone is recommended for rayon; smaller ones can, of course, be wound if desired.

## RECENT TEXTILE PATENTS

BOBBIN handling machine. 1,667,762. E. R. Alderman, Holyoke, Mass. Assigned to Farr Alpaca Co., Holyoke.

BRAIDING carrier. 1,667,974. Max, Krissiep Wyomissing, Pa. Assigned to Textile Machine Works, Wyomissing,

COP winding machine. 1,668,495. O. Elsner and O. Kuhling, Markersdorf, Germany. Assigned nine-tenths to G. F. Grosser, Markersdorf, Germany.

FABRIC and producing same, Figured. 1,667,892. G. Heberlein, Wattwil, Switzerland. Assigned to Heberlein Patent Corp., New York, N. Y.

FRAME for drawing, twisting, and winding textile materials. High-draft speed. 1,668,333. A. E. Oxley, Manchester, England. Assigned to The British Cotton Industry Research Association and Platt Bros. & Co., Ltd., Oldham, England.

HEILMANN and like combers. Actuating the cushion plate in. 1,668,498. C. Gegauff, Mulhouse, France. Assigned to Societe Alsaciene de Constructions Mecaniques, Mulhouse, France.

LOOM harness-strap connecter. 1,668,124. G. J. Pfeiffer, Providence, R. I. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

HOSIERY and garment press. 1,667,826. E. J. Schremp, Rochester, N. Y. Assigned to The Prosperity Co., Inc., Syracuse, N. Y.

LOOM attachment. 1,668,487. C. W. Bolick, Draper, N. C. Assigned one-half to George H. Swift, Draper, N. C.

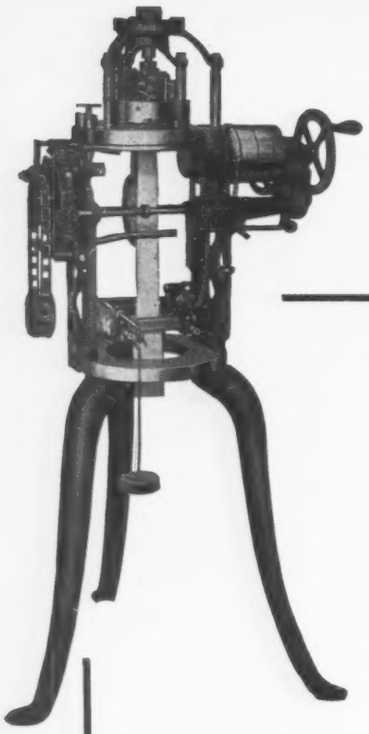
LOOMS, Box motion for. 1,668,146. A A. Gordon, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

LOOMS, Equalizer for drop box, 1,668,152. G. F. Hutchins, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass

LOOMS, Shuttle-driving mechanism for narrow-ware. 1,668,150. E. R. Holmes, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

SHUTTLE tension. 1,668,191. A. F. Clements, Oshkosh, Wis. Assigned to Waite Carpet Co., Oshkosh, Wis.

SPINNING and analogous machines, Spindle and bearing assembly for. 1,668,375. G. P. McLaughlin, Shickshinny, Pa.



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*South America:* M. Buchsbaum, Calle Alsina 1814, Buenos Aires, Argentine Republic.

*China and Japan:* Elbrook, Inc. 50 Peking Road, Shanghai, China

# MILL NEWS

## COTTON

### *New Construction and Additions*

***Arnco Mills,** Newnan, Ga. Contract for a dry pipe sprinkler system to be installed in the addition which this company is building, has been awarded to Crawford & Slaten Co., Atlanta. Lockwood, Greene & Co., Inc., Spartanburg, are the engineers.

**Alamance Novelty Mill,** Burlington, N. C., is building an addition to its main manufacturing plant to effect a concentration of equipment. Some of the looms of the plant have been in operation in a building of another unit and the new one-story, 106 sq. ft. building, steel frame, mill type construction, is to bring the full complement of machinery under one roof. The new addition will be completed in June.

***Ellenboro (N. C.) Mfg. Co.** has completed a 50 x 100 ft. warehouse building.

***Pendleton Mfg. Co.,** Autun, S. C. Plans are being drawn and it is expected that work will start soon on the addition which this company will build. New looms will be installed.

***Gaffney (S. C.) Mfg. Co.** Mill No. 1 is being torn down and plans being drawn by Lockwood, Greene & Co., Inc., Spartanburg, S. C., for the new building, to cost $160,000, which will be erected.

***Chiquola Mfg. Co.,** Honea Path, S. C. Finishing touches are being made to the 70 x 130 ft. addition which this company is building. The addition will be equipped with 5,000 spindles.

***M. & J. Mills,** Laurens, S. C., expect to be in operation on July 1. The mill building contains 1,500 sq. ft. of floor space. The company, headed by E. G. Jessee, president, and D. M. Norwood, treasurer, is capitalized at $25,000.

***Lund Co., Rock Hill, S. C.** Sidney M. Edelstein & Co., engineers of Union, S. C., announce the closing of final negotiations by the officials of the Lund Co. with the Industrial Committee of the Chamber of Commerce of Rock Hill, S. C. The Lund Co. will be the Southern branch of the Lund Textile Corp. of Fisherville, Mass., and will have a total capitalization of $600,000.00 preferred stock, and 1,000 shares common stock of no par value. The Lund Co. has leased 36,000 sq. ft. of floor space from W. J. Anderson. The first unit of Jacquard looms for the manufacture of high grade draperies, corset cover cloths, etc. are being installed. As soon as labor is trained to operate this first unit, other units will be installed until a sufficient amount of labor is trained for the operation of 500 Jacquard looms and auxiliary machinery.

### *Fact and Gossip*

**Eagle & Phenix Mills, Columbus, Ga.** Due to water being 27 ft. high along the Chattahoochie River, the Eagle & Phenix Mills were closed last week for several days. Other mills along the river were not affected.

**Cotton Mills Products Co.,** Natchez, Miss., is having Draper looms installed to replace plain looms. The mill is operating on full time.

***Nashua (N. H.) Mfg. Co.** The Jackson Mills of this company will be shut down from May 10 to June 4. The Nashua Mills will continue on their present schedule of 3 and 4 days a week.

**Mecklenburg Mills Co.,** Charlotte, N. C. Creditors of this company, which went into bankruptcy in 1923, will receive 50% of their claims.

**Ritch Mfg. Co.,** Greensboro, N. C., has been granted a charter with an authorized capital stock of $100,000, to manufacture cotton and silk products. Incorporators are A. E. Ritch, J. S. Duncan and W. J. Matthews, of Greensboro.

**Sellers Mfg. Co.,** Saxapahaw, N. C., will put on a night shift immediately.

**Rodman-Heath Cotton Mill,** Waxhaw, N. C., has started up again after having been closed down for two weeks for repairs.

**Tindall Fabrics Corp.,** Pawtucket, R. I., recently formed with capital of 1,000 shares of stock, no par value, to operate a local cotton mill, will be represented by J. F. Tausch, 175 Colingi Ave., New Rochelle, N. Y., principal incorporator. Other incorporators are Arthur Schneider and William L. Herritch, both of Pawtucket.

**Halifax Cotton Mills, South Boston, Va.,** have adopted a 3-day week operating schedule until further notice. The bleachery will not be affected for the time being.

* Indicates previous mention of project.

## WOOL

### *New Construction and Additions*

***Utah Woolen Mills,** Salt Lake City, Utah, have purchased a 10 acre site at 45th South and State St., Murray, Utah, for their $100,000 blanket plant. W. H. Hanke will be superintendent of the new mill.

### *Fact and Gossip*

**Sanford (Me.) Mills** will shut down from May 24 to June 4 for stock taking.

***Fabyan Woolen Co.,** Medway, Mass., has resumed operation after a week's shutdown.

***Quinapoxet (Mass.) Mfg. Co.** F. Carleton Dole, Princeton, Mass., deputy sheriff, has been appointed receiver for the company in $1,000 bonds pending the election of a trustee in bankruptcy at the first meeting of the creditors to be held in Worcester, Mass.

**Stanley Woolen Co.,** Uxbridge, Mass., this week started a night shift in the carding, spinning and weaving departments of the Calumet Mills.

**Uxbridge (Mass.) Worsted Co., Inc.** Fire damaged the carding and spinning departments of this mill last week. Loss is estimated at between $5,000 and $6,000.

**Downey Woolen Mills, Inc.,** Dodge, Mass. Robert S. Poblocki, Webster, Mass., has leased the Downey Woolen Mills, Inc., from Everett E. Pike and started the manufacture of sweater yarn. The mill had been closed for several years.

**William Henderson & Co., Inc.,** Philadelphia, Pa. Charter of incorporation has been granted to this concern, having a capital of $120,000, the incorporators being John J. Henderson, treasurer, William Henderson and Louis Henderson. A concern of this name has been engaged in the manufacture of Scotch Art rugs, at Torresdale Ave., and Lewis St., Frankford, for a number of years, being located in the Ford Mills.

**Laurel Woolen Mills, Inc.,** Winchester, Va. A charter has been granted to the Laurel Woolen Mills, Inc., with capital stock of $5,000 to $25,000. Officers are R. S. Fansler, president; C. P. McVicar, secretary; L. L. Fansler and F. E. Clark. The company is incorporated to buy, sell, manufacture and deal in woolen cloth.

## KNIT

### *New Construction and Additions*

**International Textile Corp.,** Inglewood, Cal., manufacturer of Inter-Tex hosiery, is now established in its new plant, 363-369 East Industrial Ave.

***Woodland (Ga.) Knitting Mill.** Work on this plant is progressing rapidly and some machinery has already been installed. It is expected that the plant will be in operation within 30 days.

**Wolverine Knitting Mills, Bay** City, Mich., have leased a local building and will occupy as an addition to present mill for considerable increase in output.

**Conrad Hosiery Co.,** Clifton, N. J., will install additional Schubert & Salzer fine gauge equipment, type H. S. L., High Speed, 24 sections, and has placed contract with Alfred Hofmann, Inc., West New York, N. J.

***Midland Park (N. J.) Knitting Mills, Inc.,** recently reported incorporated with capital of $125,000 for the manufacture of full fashioned hosiery, will begin operations in their one-story, 57 x 73 ft. mill in June. A. Lausberg is president of the company and C. Faner, treasurer.

**Rivoli Silk Hosiery Co., Plainfield,** N. J., has installed 13 new fine gauge full fashioned knitting machines. A new two-story, 90 x 60 ft. addition is now under construction which will be equipped with 10, 48 and 51-gauge full fashioned machines upon completion in 6 weeks. Cost of the new addition is $25,000.

**Asheboro (N. C.) Hosiery Mills** are reported to be installing 80 additional knitting machines.

***Bossong Hosiery Mills, Inc.,** Asheboro, N. C., which are being constructed for the manufacture of women's full fashioned hosiery, will be equipped with 18 full fashioned knitting machines.

**Cranford Hosiery Mills,** Asheboro, N. C., are said to have installed 40 new machines for the manufacture of mercerized cotton hose.

**McEwen Knitting Co.,** Burlington, N. C., is reported to be building a 110 x 150 ft. addition. Additional machinery will be installed as soon as the building is ready.

**May Hosiery Mills, Inc.,** Burlington.

# Mill News—Continued

N. C., are reported to be building a one-story, 36 x 110 ft. addition which will be enlarged later, to house full fashioned knitting machines. It is expected that this building will be in operation in 2 or 3 months. The company is in the midst of a construction program which includes raising its present mill to three stories and the erection of a building to enlarge the boarding and finishing departments.

**Hudson Silk Hosiery Co., Inc.,** Charlotte, N. C., has been granted an unlimited license by the Gotham Silk Hosiery Co., New York, to manufacture and sell pointed-heel stockings. A new mill will be built, housing 24 machines, which together with the building, will represent an investment of $300,000.

**Elizabeth City (N. C.) Hosiery Mills** have closed contract with Alfred Hofmann, Inc., West New York, N. J., for type H. S. L. high speed machines which will be installed in the near future.

**Melrose Hosiery Mills,** High Point, N. C., have placed an order with Scott & Williams for 40 new machines to be installed in Mill No. 2.

**Mountcastle Knitting Co.,** Lexington, N. C., has let contract to W. Lee Harbin Construction Co. for a building 50 x 150 standard mill construction. This company will begin operation with 100 Banner knitting machines with Jacquard attachments, and will manufacture misses' fancy hosiery. It is incorporated for $400,000 and Kenneth Mountcastle, who will be president and Holland Shoaf, who is president of the Shoaf & Sink Hosiery Mill of this city, will be active directors of the plant. This is the ninth industry to be located in Lexington during the last ten months. Construction on houses to take care of the increased population caused by the addition of nine industries is being actively pushed, there being fully 25 houses under construction in various parts of the city at this time with more contemplated for the near future.

**Fox Chase Knitting Mills Inc.,** Philadelphia, Pa., are reported to have increased capitalization to $600,000 and to be planning a large expansion program, including additional buildings and more machinery.

***Davisville, Pa.** The new hosiery mill which is being erected at Davisville will be in operation in August. Mr. Janney, 5325 North 12th St., Philadelphia, Pa., is head of this project.

**Fisher Hosiery Co.,** Reading, Pa., has just completed the construction of an addition to its mill to provide more office space and stock room capacity.

**Weinerth Knitting & Machine Co.,** Reading, Pa., are erecting a one-story addition and installing 18 new 300 needle machines with more to follow.

***Powell Knitting Co.,** Spartanburg, S. C. Lockwood, Greene & Co., Inc., engineers and architects of Spartanburg, have awarded contract for a 125,000 gallon steel tank for the Powell Knitting Co. to the R. D. Cole Mfg. Co., Newnan, Ga., and for an electric freight elevator to the Weekley Elevator Co., Atlanta, Ga.

**Pool Knitting Mills,** Sherman, Tex., are reported to be planning establishment of a new mill at Terrell, Tex., occupying leased buildings.

**Penmans, Ltd.,** London, Ont., Canada. Additional 42-gauge full fashioned machines, Schubert & Salzer make, have been ordered from Germany by Alfred Hofmann, Inc., West New York, N. J., for Penmans, Ltd.

*Fact and Gossip*

**Highland Park Knitting Co.,** Highland Park, N. J. The mill of this company on Raritan Ave., has been leased by the Acme Underwear Co., New Brunswick, N. J., for a period of 3 years, dating from June 1.

**Atlas Silk Hosiery Co.,** Paterson, N. J., has arranged for increase in capital to $775,000.

**A. V. Morris & Sons,** Amsterdam, N. Y., have sold their plant known as the Globe Mill to Lewis Goldmeer who plans to take possession July 1. The building is a three-story structure and was formerly used for yarn spinning.

***Watco Knitting Co.,** Phoenixville, Pa., plant and equipment of the Watco Knitting Co. have been purchased from creditors by Ira W. Gruber, president of the Soring City (Pa.) Knitting Co.

***S. S. Miller Hosiery Mills,** Reading, Pa. Involuntary petition in bankruptcy has been filed against this concern, in the U. S. District Court, Philadelphia, upon petition by First National Bank of Oley, Pa., John A. Eberly and David E. Colehower.

***Oxford Knitting Co.,** Woodstock, Ont., Canada, having been purchased by the Mercury Mills, Ltd., Hamilton, Ont., the operation of the local plant has now been assumed by the Hamilton company. The plant is controlled from the head office in Hamilton.

*Indicates previous mention of project.

## SILK

*New Construction and Additions*

***Armion Textile Co.,** Clinton, Mass., has completed installation of 3 new winding machines.

***Klotz Silk Mfg. Co., Inc.,** Clifton, N. J., is reported to have completed arrangements for the establishment of a natural silk manufacturing plant at Blackstone, Va., similar to the plant now being constructed at Reidsville, N. C., by that company. The site of the mill consists of the 3 blocks of buildings formerly owned by the Tobacco Growers' Cooperative Association. About 100 looms will be installed. Blackstone citizens have subscribed to $125,000 worth of preferred stock in the Klotz Silk Mfg. Co., Inc.

***Clinton (S. C.) Silk Mills,** which are being established by a new company headed by W. J. Hadfield and Sol Stutz of the Hazelton Heights Silk Corp., Hazelton, Pa., and the Newburgh (N. Y.) Silk Co., will occupy a building containing 20,000 sq. ft. of floor space. The first unit will consist of 50 looms and auxiliary machinery and about 75 people will be employed. Sidney M. Edelstein & Co., industrial engineers of Union, S. C., are in charge of construction.

*Fact and Gossip*

**Hancock (N. Y.) Silk Mills, Inc.,** have completed the liquidation of their plant through the services of the Royal Loom Exchange, Passaic, N. J.

***Oxford, N. C.** The local Chamber of Commerce announces that a Pennsylvania concern will build a silk mill here this summer. Name of the concern is not given but it is stated that J. E. Redyke, of Pennsylvania, has been here conferring in regard to a site and other matters incident to the building of the mill and that an agreement has been reached. It is stated that the mill will be built by Mr. Redyke and associates of Pennsylvania and that it will be operated under his direction. The plant will cost about $100,000, it is said.

## RAYON

*New Construction and Additions*

***American Enka Corp.** has taken options on the Tree Hill estate on the north side of the James river near Richmond, Va., and on a 400 acre tract of land on the south shore of the river between the plant of the Richmond Car Works and the site on which the Du Pont Rayon Co. is now erecting its rayon plant. It is understood that the company has options on property in other cities as well.

**Belamose Corp.,** Rocky Hill, Conn., has awarded contract to the Dennis O'Brien & Sons Co., Hartford, for the construction of a coagulating basin.

***Industrial Rayon Corp.,** Cleveland, Ohio, will build a new addition to its plant to cost over $1,000,000 if legislation favorable to the manufacture of rayon is enacted by the city council.

***Woonsocket (R. I.) Rayon Co.** Work is progressing rapidly on alterations and additions which are being made to the Nourse mill of the Manville Jenkes Co., which will be occupied by the Woonsocket Rayon Co. Machinery is arriving and the company expects to begin operations in the fall.

***Du Pont Rayon Co.,** Richmond, Va. Actual construction of the plant of the Du Pont Rayon Co. will begin on June 1.

## DYE, BLEACH AND FINISH

*New Construction and Additions*

**Queen Dyeing Co.,** Providence, R. I., is reported to have completed plans for a one-story filter plant.

*Fact and Gossip*

**Colt Dye Works, Inc.; Cramer & King Co.; Royal Piece Dye Works, Inc.,** and **Uhlig Piece Dye Works,** Paterson, N. J. It is reported that a merger of these concerns is nearing consummation and that W. L. Wirbelauer, president of the Royal Piece Dye Works, Inc., will be president of the merger.

***Consolidated Piece Dye Works,** Paterson, N. J. Application by Natale Gorga for the appointment of a receiver for this company was denied, pending an investigation of the corporation's books by a disinterested auditor to be appointed by the court.

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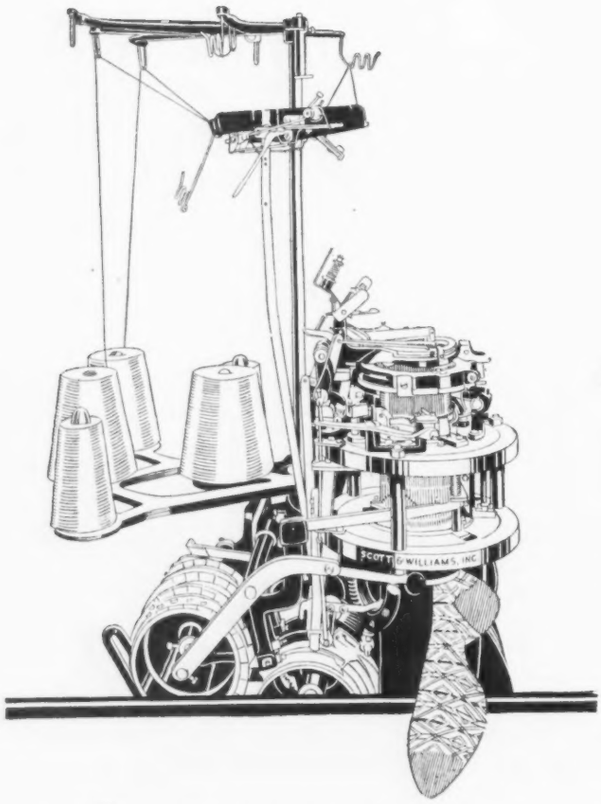

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STRIPING MACHINE

# FANCY EFFECTS *are the* VOGUE

THE new Spiral Floating Striping Machine meets the manufacturing requirements of smart fancy hose. The effects are produced by the well known floating stitch system. The horizontal striping mechanism can be arranged to control either the facing yarn or the backing yarn.

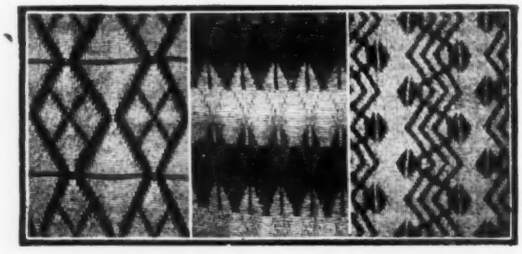
The advantages of this new machine are increased through the fact that it is built in sizes 3 inches up to 4 inches in diameter. It can be equipped with as many as six yarn changing fingers, which gives a range of five different colors under control of the pattern mechanism, exclusive of heel and toe colors. Plain stockings can be produced by throwing the fancy effects out of action.

*Established 1865*

**SCOTT & WILLIAMS**

*Incorporated*

**366 Broadway** **New York, N. Y.**



# KNIT GOODS

## Outerwear Variety Increase and Its Effect

### Production of Increased Competition and Lessening of Profits

One feature of the outerwear market which has been remarked with increasing frequency is the larger number of lines which knitters are manufacturing in their plants. It may be regarded as only natural that with a difficult selling market the manufacturer will reach out in various directions in an effort to corral something on which he may secure business at a profit. This expansion, or effort at expansion, works in two ways. It increases competition on lines which possibly have been profitable in the past, but because of new concerns entering the field, enter a competitive arena. This competition started by one manufacturer leads to similar reaction against his own product by others in the field, with the result that whereas in the past houses could number their competitors almost on the fingers of one hand, now they have been multiplied many fold and the same is true of those who have become competitors of theirs by reason of a similar effort to reach out into other fields.

### Reduction in Profits

But this spreading out thin has another effect which is even more vital than increased competition for the manufacturer. It means that with every new line that is added the overhead goes up and the possibilities of profit become smaller and smaller as variety of product increases. The most ideal plant is the one which may run on one or two lines of staple goods to full capacity instead of dividing its equipment up into various types of machines capable of turning out a wide variety of merchandise. As an illustration, there is no reason except unusual exigencies, why the knitted outerwear manufacturer who has been in the business of producing sweaters for many years should suddenly determine to put in a line of gloves and mittens and expect his selling agent who has never specialized on this type of merchandise to develop business immediately. Such effort usually means that the knitter is entering a field which is already fully occupied and not knowing the intricacies and details of manufacture and demand is likely to be confronted with a situation which is unsatisfactory in the extreme.

### An All-Year-Round Business

Outerwear selling agents are either complaining of or adapting themselves to the condition into which they find the market has developed. It used to

(*Continued on page* 59)

## Weather Conditions a Handicap

### *West Reports Fall Duplicates, but Little Activity on Spring Lines*

THIS is a weather report. Any canvass of the underwear market develops more information on this subject than on almost any other. Of course, one is reminded of the saying of Mark Twain who declared that everybody complained about the weather but so far as he was able to determine no one did anything about it. And so it is with the excuses for lack of business. Everybody lays it to the weather and the only thing that is done about it is a more continuous and more consistent effort to secure orders in spite of the handicap of climatic conditions.

### The West Optimistic

Those who have had late reports from the West are encouraged over the attitude of buyers. The latter declare that with more favorable weather they are receiving a larger volume of business and are anticipating a good movement of fall goods. Some have backed up this belief by substantial duplicate orders. As a matter of fact, in certain directions duplicates for fall have been surprisingly good from western sections. Wool goods have shared in this re-ordering and agents for this class of merchandise feel much encouraged about the future of the trade. This duplicate ordering has not come as a rule from those who purchased lightly at the beginning of the season. On the other hand, it is more evident in the case of those who anticipated their requirements to a certain extent but who now feel they can look forward to an even greater volume of business than their original expectations led them to believe likely.

### Higher Prices Possible

Undoubtedly one of the reasons why buyers have taken on additional quantities of fall goods, both in wool and cotton, is that they feel there is a great likelihood of a higher level of prices before the season is concluded. Everything would seem to justify this opinion and if there should be from now on a moderate increase in the demand for duplicates, there is every reason to believe the advance will be forthcoming. So far no intimations have been made that either in cotton or wool underwear for fall any change is imminent. At the same time, in both types of undergarments the raw material situation would seem to justify such action. The manufacturer has undoubtedly hesitated because of the fear that the buyer's reaction to such a course would be unfavorable. If, however, a sufficient volume of business is secured within the next month or two, there will be increasing justification for demanding higher prices. With respect to cotton underwear, knitters have undoubtedly a small proportion of their raw material bought at favorable prices. Of course, there are exceptions to this rule, but it may be regarded as a truthful statement for the great majority that they are obliged to figure additional business on a replacement cost today. In wool the cheap prices that were brought about by competition early in the season were supposed to be in force for only a limited period. In many cases this time limit has expired and certainly the opportunities for buying raw material have not improved so that any decision to advance prices here would be fully justified. The buyer is not averse to such action on the part of manufacturers; the only thing that he wants to know is whether the advance, if established, will be maintained or if he will have to figure on a weaker market later on. Were he convinced that any rise in prices, if and when made, was to be permanent, there is no doubt he would not hesitate to come into the market. As a matter of fact, the buyer is more apt to operate on an advancing market than on one which evidences decided weakness.

### Constant Effort Necessary

A good many representatives of underwear concerns are at present on the road or have just returned from trips, with the likelihood that they will go out again before long. Whatever the success or lack of success attendant upon these salesmens' journeys, the fact that they are or have been out illustrates the necessity of keeping in constant close touch with the buyer. As long as the latter maintains his practice of operating from hand-to-mouth, with an increase in this direction rather than otherwise, just so long will it be necessary to pay traveling expenses to an unusual degree. The selling agent cannot expect orders to come floating in to the office simply because the buyer did not operate freely at the beginning of the season. If he is not on the firing line he is going to find that some one of his competitors has realized the necessity of eternal vigilance in the hope that by being constantly alert he may discover opportunities which would be lost to the man or house that does business on old lines.

### Spring Goods Move Slowly

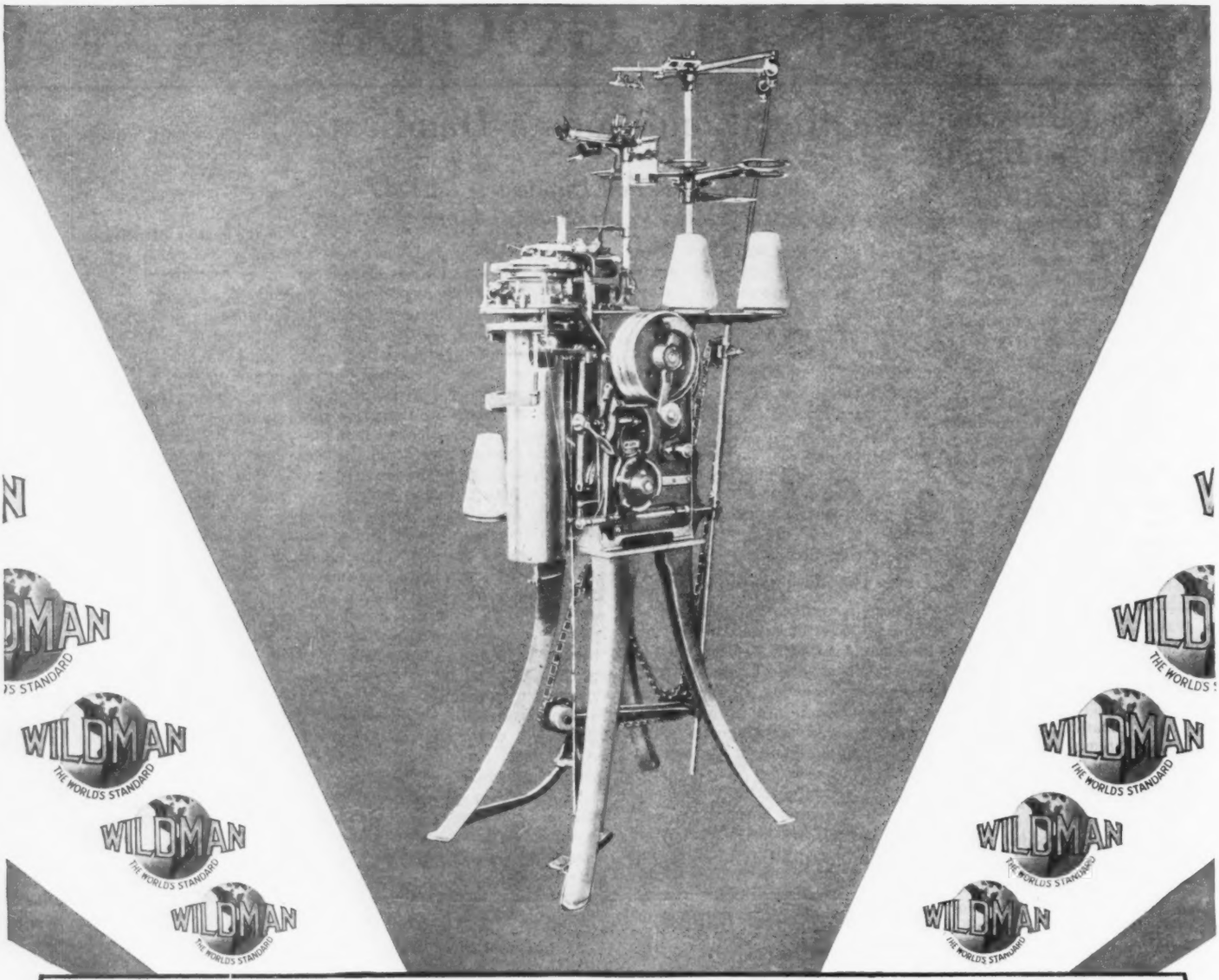
It is difficult to find any market where spring goods are moving in any free way. Selling agents are beginning to realize that the demand for deliveries earlier in the season did not mean necessarily confidence in the distribution of these goods at second hand. This insistent request, which found practically everybody backward in the matter of deliveries, was made simply for this very reason. The buyer realizing that he had given the knitter an insufficient time to make satisfactory deliveries was determined to put forth his best efforts so that he might have assurance that what he needed to start his season with would be available. Having received this assurance he is not looking for more goods. In instances he is asking that deliveries be held up and is not amenable to any arguments of the seller to take on additional quantities. It may be that he will have to buy these before the season is much older, dependent again upon weather conditions, and if he does there is no question but that he will have considerable difficulty in getting exactly what he wants. He is likely to do a good deal of substituting.

### New York Market Pessimistic

It is somewhat trite to say that the local selling market is the most pessimistic selling center in the country. This has been remarked so many times that even the buyer is beginning to believe it. It would seem as though agents in a good many instances were driving trade away by their attitude of pessimism and discouragement over the situation and the future. Many buyers who have come into this market all prepared to place a liberal business have been discouraged after a canvass of local selling houses and have frequently gone back home without placing the orders they expected to place. It was ever thus on a declining market in which an absence of backbone by the seller seems a preeminent feature. It may be that a more hopeful attitude would have a very different effect.

## Wisconsin Warden Opposes Hawes-Cooper Bill

MILWAUKEE, Wis.—"State Use" bill which would have goods made by prison labor disposed of only in the State wherein they are made, was scored in an address by Warden Oscar Lee of the Wisconsin State Prison at Waupun in an appeal to the legislative council of the League of Women voters to assist in working against the Hawes-Cooper bill now before Congress. According to the warden, less than one-twentieth of one per cent of the goods sold in this country are prison made. He said that the passage of an act such as the Hawes-Cooper bill would work hardship on the prisoners and their families, as it would prevent many




The installation of Wildman Machinery is a big step in the right direction

WILDMAN MANUFACTURING CO.,
NORRISTOWN, PA.

WILDMAN
THE WORLD'S STANDARD

# WILDMAN
## SPRING NEEDLE KNITTER

# Knit Goods—Continued

men from earning money which is now used to help their families.

At this prison, hosiery is one of the chief articles of manufacture, and there has been complaint on the part of manufacturers and business men that this industry should not be allowed to continue.

## Group Insurance for Perkins Hosiery Mills' Operatives

COLUMBUS, GA.—The Perkins Hosiery Mills here have entered into arrangements with the Metropolitan Life Insurance Co. for the issuance of group policies life insurance to all their employes.

It is said that 96% of their employes subscribed to the insurance at a cost of 15c per week, the mill paying the additional cost over that amount.

## Outerwear Market

(*Continued from page* 57)

be the case not so very many years ago that manufacturers of sweaters and other outerwear garments could open their lines in November or December and feel positive they would sell up their product by the end of February. Any comparative charts of the business secured by houses of this kind would note a very material difference between the present situation and that which obtained in 1921 or 1922. Today the volume of business secured up to the end of February would by no means take care of the average output of a good-sized mill. And yet it is probable that the year's business would not show any material decline from that of the previous period. It simply means that business is distributed more evenly and that the months of March, April and May show a larger volume than was the case a few years ago, thus making up in the aggregate what it formerly took only two or three months to accomplish. The agent often becomes restless under this apparent piece-meal method of operation as well as disgusted with the constant problems which are arising from day to day. But he continues to do business and when his books are made up for the year he finds that the volume in the aggregate is in some way or other equal, if not in excess, of that which he has been in the habit of getting. Profits may not be there because of the increased expense of doing business, but his volume as a rule does not suffer materially.

### Sweater Coat Duplicates

In a good many instances selling agents report a very satisfactory duplicate business on sweater coats. Manufacturers are threatening their agents in instances with an advance in price. On wool goods reports of isolated cases where an advance has been registered are current. In cotton lines, however, in spite of the warrant for increased quotations, agents are trying to dissuade manufacturers from naming any higher levels, believing that such action would simply put their lines out of the market, as long as the great majority are not figuring on any such move. Those going to the retail trade report a satisfactory demand for combination suits, consisting of sweaters and skirts to match.

### Bathing Suits Disappointing

Very few manufacturers of bathing suits are willing to admit that their experience in the last few months has been satisfactory. There have been advances on worsted bathing suits but on all lines there is an absence of activity and interest, much of which is ascribed to unfavorable weather conditions. The only consolation is that few manufacturers have any stock on hand and that if the buyer discovers later that he needs more merchandise, he will have difficulty in getting it for the delivery demanded. The majority of bathing suit manufacturers have reached the point where they are not making up stock in advance, in the hope that it will be eventually sold. They prefer to shut their mills down rather than to accumulate merchandise. Therefore, if the buyer is calculating on a supply available for immediate shipment he is reckoning without his host in the majority of cases.

## Higher Drapery Tariff Urged to Aid Philadelphia Mills

PHILADELPHIA.—A number of manufacturers of drapery and upholstery fabrics have received a letter from Upholstery Weavers Union, Local No. 25, suggesting that a conference be called for discussion of the tariff situation, which vitally affects this section of the industry. The letter points out that the importation of such goods from abroad has consistently increased, finally reaching such a state that a danger to the 36 concerns and approximately 6,000 weavers in the Philadelphia section has developed. It also advises the manufacturer that the weaver's union has enlisted the support of other organized and affiliated groups engaged in the same trade, to press the tariff question.

The suggestion is made in the letter that a conference on the matter be called after which a committee could possibly be appointed to go before the proper body at Washington for the purpose of explaining the situation in Philadelphia weaving trade and seeking an upward revision of the tariff on upholstery and drapery materials. Herman Blum, president of Craftex Mills, Inc., and chairman of the Tariff Committee of the United Upholstery Manufacturers' Association, said he would recommend that the conference be held, this being in line with recommendations recently made by Mr. Blum in a paper prepared after a long and careful study of the rapid expansion of imports of drapery and upholstery goods during recent years.

PARAMOUNT
*Interchangeable*
TOE FORMS
5 SIZES
ON ONE FORM

An advanced type of changeable-toe form incorporating distinctive features of superiority.

Toes are solid throughout, insuring positive heat conductivity. No air pockets or spaces to prevent rapid and uniform heat transfusion to the toe members.

Toes are interchangeable and are fastened to the forms with a positive locking device which eliminates, entirely, faults of looseness and binding common to all friction joints. Unlocking the toes for change is accomplished instantly, and leverage devices for removing toes are not required.

All tearing edges eliminated. A special jointless edge at the toe is absolute protection against thread pulling.

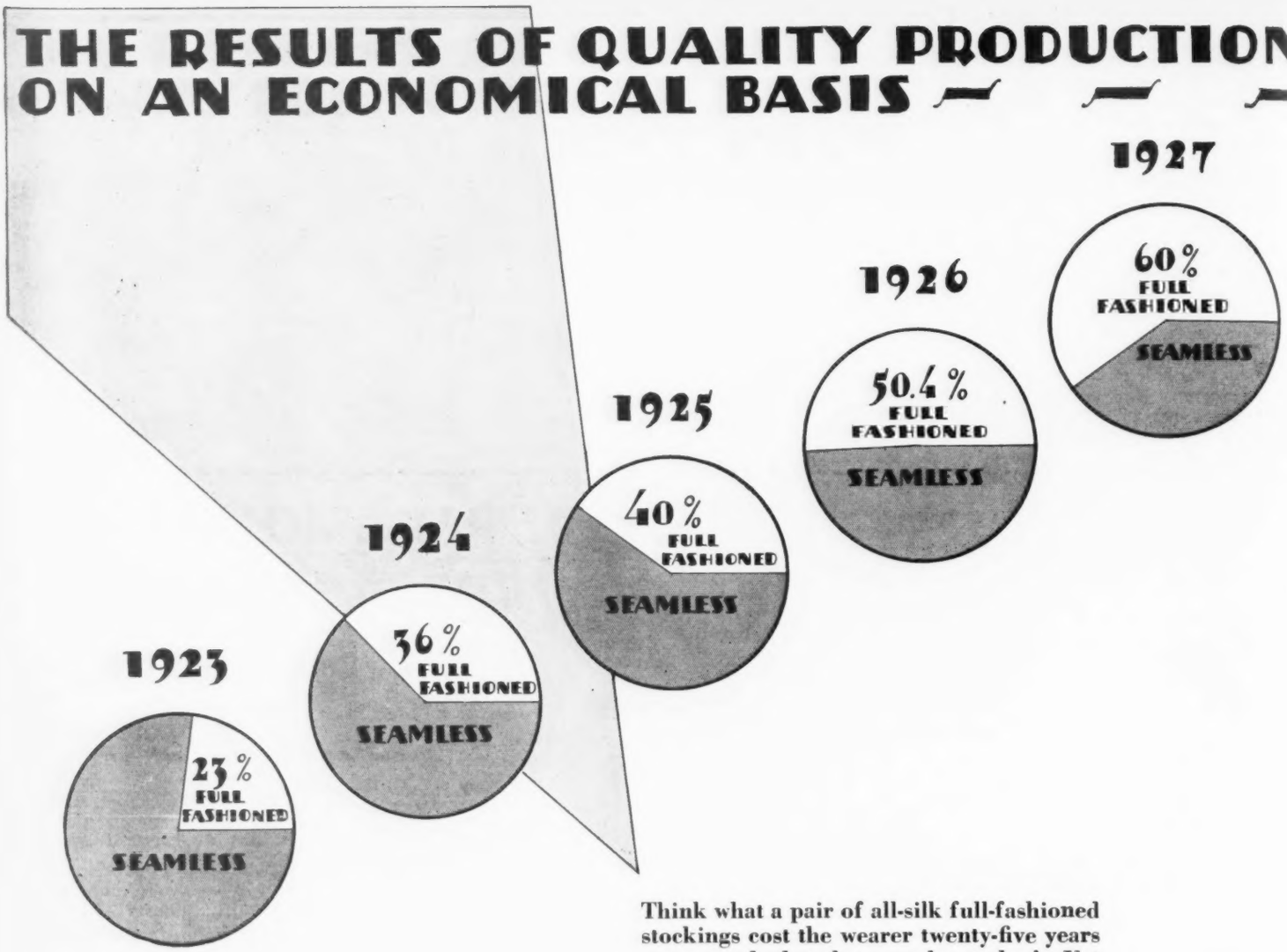
A precise heating arrangement delivers steam directly at the toe and assures proper heat at all times.

The superiority of Paramount Forms for hosiery drying and finishing is proved by the fact that the number of mills using them exceed, by a large percentage, the combined total of mills using all other methods.

See also CONSOLIDATED TEXTILE CATALOG

**Paramount Textile Machinery Co.**
**337 W. Madison St., Chicago, Ill.**

# THE RESULTS OF QUALITY PRODUCTION ON AN ECONOMICAL BASIS




**Think what a pair of all-silk full-fashioned stockings cost the wearer twenty-five years ago — and what they cost her today! Yet the manufacturer pays more for his silk this year than he did in 1903.**

**What's the answer? Machines!**

**Machines capable of turning out merchandise of uniform high quality day after day, year after year, without interruption.**

**Machines whose low operation and maintenance costs yield the greatest possible revenue from a very small margin of profit.**

**Quality production on an economical basis!**

TEXTILE MACHINE WORKS
READING, PA.

See also CONSOLIDATED TEXTILE CATALOG

# READING

## FULL-FASHIONED KNITTING MACHINES

# FABRICS

## Dull Week in Wool Goods

### *Interest Falls Off, Though Up Trend Still Persists*

THE last week brought little tangible development to the wool goods market. The chief subject of comment lately has been the falling off in ordering which occurred after a trend toward improvement came into effect at the close of April and early in May. The principal question asked at present is what can be done to broaden the market? A few selling houses of high reputation have all the business they can take care of in the time specified for delivery. The majority, however, are in need of orders. Buyers' coverage for the coming fall season appears light and hope is constantly expressed that orders will soon overflow from the already well sold houses to those not so well situated. Actual developments along this line, however, are slow.

Meanwhile the price basis which is current is still lagging behind the full replacement cost. Many houses have made small advances during the last three weeks and a few have actually made two advances during the last month. The change is gradual and scattered, as several of the leading lines are still unchanged from opening levels.

The higher levels are not impressing clothiers to any extent. The large houses seem to take it for granted and some of the smaller ones are taking the attitude that it is a movement in the wrong direction and will be corrected by a reaction in raw wool before many more months pass. This feeling of distrust in the wool market is a new note, but does not appear to be founded in anything except guess work. Wool dealers regard the world wool markets as well established and generally above American levels so that a setback might be experienced abroad without involving a similar change in domestic circles. Fall duplicates which have been received during the last few weeks in the men's wear market are scant, as previously indicated, but sellers comment on the fact that they often come from unexpected sources. At the same time the buyers on whom trust was laid for generous duplication have proved disappointing in their activities.

* * *

***Spring, 1929:*** There is less than the usual advance knowledge as to the best type of styles for the spring, 1929, season. Men who have been in contact with mill representatives on this subject say that diversity seems to be the solution of the problem, as stylers are trying out a great many things in the hope of striking it right with at least a few of them. Sample blankets have been prepared by the majority and the market will be ready to open early if desirable. A few clothiers have indicated their wish to look over sample blankets, but it is not thought that their ideas on next spring's requirements are any more definite than manufacturers'. If the current wool market holds, there will be need for higher prices at the spring opening. If the market weakens, that change might come at a time which will make it embarassing to maintain stability of cloth prices. Certainly there is no reason now on the horizon for any drop in wool.

* * *

***New Season Tropicals:*** Tropical lines for the new spring season will as usual be opened before the regular spring lines. The fact that competition promises to be stiff, is indicated by the report from a buyer that he was offered a share in one line prior to general opening, at the same prices as were current at opening a year ago. Of course this is a buyer's report and must be taken with reference to the source.

* * *

***Overcoatings:*** There has been a lull in overcoatings for next fall and the amount of goods still unbought which clothiers will need for next fall is estimated as considerable. If true, operations must improve before the end of the next two months.

* * *

***Women's Wear:*** Cloak and suit houses have done little of a general nature for the fall season. Sample needs only have been covered. As a large quantity of these goods will be piece dyes, users will have the opportunity of placing orders with greater confidence than would be the case if a strictly fancy season lay ahead.

* * *

***New Shirt Fabrics:*** The Pacific Mills, worsted department, Lawrence & Co., selling agents, have opened for prompt deliveries a new line of fabrics for the skirt and dress trades, including six numbers. The fabrics are 54 inches wide, and prices range from $1.52½ to $1.87½, net 10 days, 60 extra. Checks, plaids and striped effects are emphasized.

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**The Brightwood Mfg. Co.**, woolens and worsteds, North Andover, Mass., is closing its plant today for an indefinite period. A meeting of creditors will be held in the near future at which it is hoped to make arrangements for raising additional capital and continuing the business.

## Cloths Sensitive to Cotton

### *Ups and Downs of the Staple Market Sentiment Is Following*

AS cotton goods merchants forecast several weeks ago and as reported in these columns at that time, the market has been unusually sensitive to fluctuations of the raw material lately. Finished goods as a group are doing fairly well, since the advanced levels of cotton have made this merchandise better value than it was a few weeks ago. The gray goods tone, however, is directly dependent on the raw material. A 30 point rise in the staple brings out many cloth buyers, while a similar decline leaves the cloth market devoid of interest except in impossible bargains.

The fact that users of cotton goods are moving slowly and covering only nearby needs, indicates a strongly conservative attitude. They are taking the least speculation possible under the circumstances, but by leaving the future so largely uncovered they are in a sense speculating on the short side of the market. The majority sentiment among buyers appears to be bearish, while sellers regard the market as much more likely to strengthen than to decline. Of course this is a sentiment natural to the different sides of the market, but in this case the various individuals concerned are acting on their feeling. From an unbiased viewpoint it seems that sellers have a little the better of the argument, as raw cotton, at least, has shown itself much more sensitive to bullish than to bearish news.

The effect of the New Bedford strike has not made itself felt on the goods market with much force up to the present time. By next fall, however, if it continues, there will doubtless be a stringency due to the idleness of so many fine goods looms. It is the opinion of those close to the situation that the struggle will be long drawn out and that those who may look for an early resumption of work on the part of New Bedford looms are unduly optimistic. A certain amount of this trade is gradually finding its way to southern looms, but it seems unlikely that the loomage there on these particular goods will be sufficient to turn out the needed yardage over any considerable length of time.

* * *

***Ginghams:*** Each week it has been thought that prices on new season ginghams would be named and each week those interested in this phase of the market have been disappointed. It is again said that the leading factors are about to act and it may be that before the week ends prices will be named. There seems every reason to expect a small advance, though ginghams have not been meeting great success for dress use recently. A new field for table covers and draperies remains to be developed.

* * *

***Bleached Goods:*** Standard lines are quieter after a period of fair interest. Buying has apparently burned itself out for the time being. Bleached specialties are still drawing interest but buyers are much disposed to bargain.

* * *

***Fine Gray Goods:*** Efforts to buy a moderately fair quantity of 90 x 60s at 10¾c were without success. While there had been reports of this price at the start of the week, most sellers later asked 11c. Second hands might take 10⅞c. Other styles were featureless, with prices practically unchanged. The combed broadcloth situation also appeared generally quiet and unchanged.

* * *

***Print Cloths:*** Print cloths were quiet through most of the week and even though cotton was fairly strong in tone despite its fluctuations, gray goods dropped ⅛c from a week ago. For 64 x 60s some first hands would accept 7¾c which was generally refused last week. Similar cuts of ⅛c were noted on other standard constructions. Buyers are not to be tempted and they act quite as though the outlook were for lower prices despite the evidence on hand from many quarters that stability or an upturn is easily possible.

### Cotton Goods Quotations

| | May 14 | May 7 | May 18, 1927 |
|---|---|---|---|
| Spot cotton, N.Y. | 21.55¢ | 21.85¢ | 15.80¢ |
| **Print Cloths** | | | |
| 27- in., 64x60, 7.60 | 5½-6¢ | 5⅝-6¢ | 5-5⅛¢ |
| 38½-in., 64x60, 5.35 | 7¾-8¢ | 7⅞-8⅛¢ | 6⅞-7⅛¢ |
| 39- in., 68x72, 4.75 | 8⅞-9¢ | 9¢ | 7⅞-8⅛¢ |
| 39- in., 72x76, 4.25 | 10⅝-10¾¢ | 10¾¢ | 9¢ |
| 39- in., 80x80, 4.00 | 11¾¢ | 11⅜-11¾¢ | 9⅞-10¢ |
| **Brown Sheetings** | | | |
| 36- in., 56x60, 4.00 | 9-9¼¢ | 9-9¼¢ | 8¢ |
| 36- in., 48x48, 3.00 | 11¢ | 11¢ | 9⅜¢ |
| 37- in., 48x48, 4.00 | 8¼-8¾¢ | 8¼-8¾¢ | 7⅛¢ |
| **Pajama Checks** | | | |
| 36½-in., 72x80, 4.70 | 9¼-9⅝¢ | 9⅝¢ | 7¾-8¢ |
| 36½-in., 64x70, 5.75 | 7¼-7⅝¢ | 7⅝¢ | 6½-6⅝¢ |
| **Miscellaneous** | | | |
| Drills, 37-in., 3 yd. | 11¼¢ | 11¼¢ | 10¢ |
| Denims, 2.20s | 15¢ | 15¢ | 14½¢ |
| Tickings, 8 oz. | 21½-23¢ | 21½-23¢ | 18½-20¢ |
| Standard prints | 9¢ | 9¢ | 8¢ |
| Eastern Staple gingham, 27 -in. | 10½¢ | 10½¢ | 9¢ |

## Burlaps Are Steady

### Traders' Sub-market Bids Are Not Attractive to Sellers

Cables from the primary burlap market in Calcutta early in the week reported prices unchanged or firmer. A number of bids on shipments at low

DISTINCTIVELY MODERN in their beauty and versatility, as in their practical and hygienic qualities, fabrics made from Celanese brand yarns are today's outstanding success in the field of fine textiles. In all of their constructions . . . knitted and woven, sheer and heavy . . . they *sell*, and sell at increasing speed month after month. Fabrics made of Celanese brand yarns are fast dye, and actually improve with washing. Perspiration cannot harm them. They never shrink nor stretch. They are cozy in all weathers. They are wonderfully durable.

# CELANESE
REG. U.S. BRAND PAT. OFF.
# YARNS

Absolutely regular, extremely elastic, Celanese brand yarns permit more loom production because of less loom stoppage. They are available in deniers from 45 to 300 and upward, delivered either on 5″, 6″, or 7″ cops, or in skeins, or on cones, or sized in skeins, or dyed in skeins, or sized warps either on client's beams or on our paper shells. The services of our weaving, knitting, dyeing and sizing experts are at your free disposal.

# CELANESE

**Celanese Corporation of America, 15 East 26th Street, New York**

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38 Chauncy Street, Boston
1116 Johnston Bldg., Charlotte, N. C.
166 West Jackson Blvd., Chicago

Works at AMCELLE (near Cumberland) Maryland
Canadian Address: Canadian Celanese, Ltd., Montreal

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## Fabrics—Continued

levels did not interest sellers. Traders were ready to buy in several positions at a price. On the spot and afloat most sellers held their terms steady. There were occasional offerings at concessions, these having the effect of causing the market to slip lower on most of the standard constructions.

Recent quotations place spot and afloat 8 oz. 40s at 8.10c; May shipments from Calcutta were at 8.15c, June shipments at 7.85c, July-September at 7.70c and October-December at 7.45c. Spot and afloat 10½ oz. 40s were at 9.55 to 9.60c; May shipments at 9.70c, June at 9.70c; July-September at 9.70c and October-December at 9.45c.

# Silk Fabric Prices Lower

### *Manufacturers Are Cleaning Out Stocks—Velvets Sell Well Already*

BETWEEN season dullness has afflicted the silk fabric markets and the majority of business being received just now is unsatisfactory in the sense that it represents forced selling. Volume is being fairly well maintained but prices are definitely lower. In certain staple constructions even to the point of including the sheer weaves which should be good in anticipation of the summer's business, there has come extreme price cutting. This development has resulted in a number of mills curtailing already and others are planning to do so shortly. Few have shut down altogether.

Other factors than the poor prices are forcing reduced schedules. High grade raw silk in the 13/15 size which is really needed for the sheer materials now being woven is difficult to obtain and high in price. The combination of the two factors just mentioned makes it almost impossible for mills to go ahead making up goods. One importer last week stated that he looked for no real quantities of good silk to arrive before August.

* * *

***Velvets:*** Velvets are being accepted in the fullest sense of the word. Instead of waiting for the fall season to bring out new ideas in the transparent velvets, many coat houses are now showing coats for use with chiffon and georgettes for the summer. Due to the shortage and the high prices asked for the early deliveries of the transparent velvets, velveteen, chiffon velvets and other fabrics of this order are being used.

* * *

***Georgettes:*** Market in these numbers which should stay fairly active and strong through June, is already disturbed by underselling of most virulent nature. The staple 80 x 76 construction in 3 thd is now selling at the lowest prices in years, lower than when raw silk was 50c a pound cheaper. This number finished and weighted can be gotten for $1.10 as compared with $1.25 two months ago.

* * *

***Crepe-de-chine:*** Prices very close and demand inactive.

* * *

***Radium:*** Reported below replacement cost with demand dull.

* * *

***Prints:*** Silk houses now frankly cleaning out their left over stocks and finding it easy enough to do so in view of the excellent retail demand.

* * *

***Silk Situation at a Glance:*** PRODUCTION: Declining.

DEMAND: Smaller.

STOCKS: Ample.

RAW SILK: Stocks smaller; Prices steady.

SENTIMENT: Disturbed by increasing competition.

### Golding Retires from Stehli

The StehliSilks Corp. announces the retirement of E. I. Golding as president and general manager of the Stehli Fabrics Corp. The retirement will take effect in June.

The StehliSilks Corp. will take over the entire management of the Stehli Fabrics Corp. and continue in operation as a department of the StehliSilks Corp., producing the highest type of novelties and quality weaves.

### Botany Features "Nuvolaine"

A recent issue of "The Trend" by the Botany Worsted Mills Fashion Service Department features Nuvolaine, a sports fabric for mid-summer use. The company states:

"Newest of the Botany light-weight sports specialties, Nuvolaine, embodies a silken fineness due to its simplicity of construction and superior basic stock. Its welcome is especially cordial this season as it is printed in both ultra-modern and old-time designs on 54-inch width material.

"The patterns submitted are of authentic and seasonal style interest, endorsing the floral theme as well as the modernistic interpretations.

*"Design Trends:* Angular motifs in two tones of color on light grounds; Ombre angular treatment of modernistic genre; Small closely spaced florals in three tones of one color; Spreading designs in brilliant colors, utilizing the fruit subject for dot and spot patterns."

---

***Miesch Mfg. Co.**, Paterson, N. J., which recently took over the Buser Silk Co., Inc., Paterson, announce that there will be no change of name of either company. The Johnstown, Pa., plant of the Buser Silk Co., Inc., which produces broad silk will operate independently. The consolidation affects only the two ribbon plants of the Buser Silk Co., Inc., at Paterson and at Allentown, Pa.

***Pasquar Silk Mills, Inc.**, Paterson, N. J., which recently began operations in their leased quarters at 56 Warren St., are equipped with 28 looms for the manufacture of broad silk. The company is capitalized at $100,000. Vincent Pasquariello is president and treasurer.


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# FINANCIAL

## Scant Change in Southern Mill Stocks

GASTONIA, N. C., May 12.—No changes of importance were made during the week in the list of southern cotton mill stocks according to the weekly summary as prepared by R. S. Dickson & Co. The average in bid price of 25 most active stocks closed at 110.60 as compared with 110.76 for the previous week.

A number of the higher grade preferred issues continued in demand throughout the week with the demand exceeding the supply at present market quotations.

## Silk Stocks on N. Y. Exchange

*(Week ending May 15)*

| 1928 High | 1928 Low | Stock | Sales | High | Low | Last |
|---|---|---|---|---|---|---|
| 22 | 18½ | Belding Heminway.. | 2,600 | 18⅞ | 18½ | 18½ |
| 17⅝ | 11½ | Century Ribbon .... | 11,400 | 16⅝ | 13 | 16 |
| 76½ | 62⅝ | Julius Kayser ..... | 9,800 | 75 | 72½ | 74½ |
| 28⅝ | 16 | H. R. Mallinson.... | 10,600 | 27¼ | 25 | 25⅝ |
| 13 | 7⅝ | Van Raalte ..... | 400 | 9⅛ | 9 | 9 |

## Rayon Stocks on N. Y. Curb

*(Week ending May 15)*

| Stock | Sales | High | Low | Last |
|---|---|---|---|---|
| Celanese Corp. ..... | 8,700 | 98¼ | 90⅜ | 96¾ |
| Courtaulds, Ltd. ..... | 7,200 | 24⅞ | 22½ | 24½ |
| Industrial Rayon..... | 14,200 | 22⅝ | 21⅝ | 22 |
| Tubize Art Silk..... | 650 | 6.9½ | 601 | 614 |

## New England Textile Stocks

**(Quotations at "Public Sale" are based upon last sales at Boston public auction and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.)**

| | Public Sale | Bid | Asked |
|---|---|---|---|
| Am. Mfg. pfd..... | 82 | 72 | 77 |
| Am. Wool pfd..... | 54 | ... | ... |
| Amoskeag, new.... | 24 | ... | ... |
| Androscoggin ..... | 80¼ | 78 | ... |
| Arlington ..... | 41⅛ | 38 | 41 |
| Bates ..... | 110⅛ | 110 | 114 |
| Berkshire Cot ..... | 131 | ... | 127 |
| Bigelow-Hfrd, com.. | 92 | ... | ... |
| Boott ..... | 122⅞ | 118 | ... |
| Edwards ..... | 70 | 85 | ... |
| Esmond, pfd..... | 101 | 100 | ... |
| Farr Alpaca ..... | 125¾ | 124 | 128 |
| Great Falls ..... | 6¼ | 6 | 9 |
| Hamilton Woolen.. | 21 | 13 | 18 |
| Hill ..... | 17 | 17 | 18 |
| Ipswich, pfd. ..... | 13 | 12 | 16 |
| Ipswich, com..... | 2½ | 2 | 5 |
| Lawrence ..... | 67⅞ | 67 | 69 |
| Ludlow Asso ..... | 200 | 190 | 203 |
| Merrimack, com.... | 143 | 156 | ... |
| Nashua, Com..... | 52⅜ | 54 | 58 |
| Nashua, pfd..... | 94⅛ | 92 | 95 |
| Naumkeag ..... | 153 | 148 | 153 |
| N. E. So. pfd..... | 4 | ... | ... |
| Otis ..... | 38 | 30 | 40 |
| Pacific ..... | 32½ | ... | ... |
| Pepperell ..... | 91⅛ | 89 | 93 |
| Plymouth Cordage . | 74 | 74 | 77 |
| York ..... | 21 | 24 | 28 |

## New Bedford Quotations

**(Quotations furnished by Sanford & Kelly)**

| | Bid | Asked |
|---|---|---|
| Acushnet Mills ..... | 67½ | 67½ |
| Beacon Mfg. com..... | 125 | ... |
| Beacon Mfg., pfd..... | ... | 96 |
| Booth Mfg. Co., com..... | 40 | ... |
| Booth Mfg. Co., pfd..... | 50 | ... |
| Bristol Mfg. Co..... | ... | 97½ |
| Butler Mfg. Co..... | ... | 42 |
| City Mfg. Co..... | 100 | 101½ |
| Dartmouth Mfg. Co., com.. | 84 | 86 |
| Dartmouth Mfg. Co., pfd... | 80 | 82½ |
| Fairhaven Mills, pfd..... | 5 | ... |
| Gosnold Mills, com..... | 3 | 6 |
| Gosnold Mills, pfd..... | ... | 21 |
| Grinnell Mfg. Co..... | 52½ | 57½ |
| Hathaway Mfg. Co..... | 85 | ... |
| Holmes Mfg. Co., com..... | 40 | ... |
| Holmes Mfg. Co., pfd..... | ... | 50 |
| Kilburn Mill..... | ... | 75 |
| Manomet Mills ..... | 2¼ | 3¼ |
| Naskawena Mill ..... | 37 | 38½ |

*(Continued on page 100)*

# Do Stocks Forecast Expansion?

### *If So, Textiles Should Participate— Textile Shares Now at Record Lows*

BOSTON, May 16.

WHILE it is very generally held by economists that the phenominal speculative boom in the stock market is made possible in large part by the unlocking of vast sources of credit, both Governmental and industrial, an increasing number of financial and business authorities are now accepting the stock market boom as forecasting, in part at least, another period of general business activity and prosperity. A typical summing up of the situation is found in the following excerpt from a study of "The Price Movement" in *Barron's*:

"All sorts of reasons are offered for the great strength of the stock market, the outstanding one being the enormous supply of credit as evidenced in the brokers' loans and the relatively easy rates in the call money market. One indication of the stock market barometer may well be kept in mind, because in the past it has proved a dependable guide to the business of the country. If the stock market is strong today, it is a justifiable inference, on all past experience, that the business of the country will show marked expansion in a few months' time, after some contraction and even some unemployment. It may fairly be said that money is plentiful in Wall Street because resources are not fully taken up elsewhere. A larger use for floating capital in the early fall seems probable, even if the speculation in stocks simultaneously tends to contract. It need hardly be said that the barometer does not pretend to forecast the duration of that period of expansion."

### Will Textiles Participate?

Assuming that this forecast is correct, every class of manufacturers will be anxious to know whether their particular industry is in a position to participate in the coming business revival. Irrespective of whether or not there is a general scaling down of present speculative valuation of securities in the stock market there will be ample capital available for the expansion of every sound industrial unit. This is as true of those industries that have been enjoying uninterrupted prosperity, as of those like textiles that have been suffering during a long period from sub-normal demand. Activity may be maintained in the automobile and radio industries, but it is reasonable to expect that a greater percentage increase in activity will be enjoyed by basic industries whose production for a long period has been radically curtailed.

No basic industry has suffered more serious curtailment of production and consumption than the textile industry, particularly the cotton and wool divisions of this great industry. With only minor exceptions there are no stock accumulations of consequence between the mills and retailers, and recent advances in raw material prices can be depended upon to maintain curtailment of production by the mills until there is a substantial increase in demand for manufactured goods.

### Speculative Value of Textiles

Of all classes of industrial securities, and measured by any yardstick, textiles have participated the least in the speculative stock boom and are now relatively the lowest in stock value. Even such neglected issues as oils, sugars and coppers are relatively higher as compared with stock values of the last five years than textiles. Assuming that there is to be a general revival of business within the year, and that most textile mills that are well equipped, managed, financed and merchandised, will participate eventually, then it will require comparatively little discrimination to pick up textile shares that within the next two years should appreciate greatly in stock value and in yield. For the investor who operates with ultra-discrimination the opportunities to pick up textile shares that present attractive speculative possibilities are numerous.

It is well in this connection to remember that, with the exception of the rayon industry, there is no branch of textiles that has been expanded materially for the last five years, excepting such expansion as has resulted from increased efficiency of existing plants. The industry is basic and must grow with the country, and the fact that there has been very little increase in machine equipment for five years or more gives reasonable assurance that it must participate in any substantial improvement in general business.

### Canadian Conn. Refinancing

Stockholders of the Canadian Connecticut Cotton Mills, Ltd., have been notified of a plan for the reorganization of the company's capital structure and asset values that is recommended by the directors and will take action on the plan at a meeting to be held June 5. If the plan is approved the holder of each first preferred share will receive $50 par value of the debentures and 2 shares of no par common stock. The holder of each share of Class A or Class B common stock will receive one-tenth share of the new common. A balance sheet as of February 11, 1928, showing the position of the company after giving effect to the proposed changes, gives a book value of $24.76 for the new common shares. If the $50.00 par debentures are valued at $45 then preferred stockholders will receive securities to the value of nearly $95 in exchange for each share of preferred now outstanding. For the year ended September 10, 1927, the company showed a net loss of $56,660, and after allowing for surplus adjustments and dividends on the cumulative preferred stock the surplus was reduced to $18,501. For the five months from September 10, 1927, to February 11, 1928, there was a net loss before surplus adjustments of $20,039. On February 11 last the company had current assets of $2,017,070 against current liabilities of $439,984. Dividends amounting to $720,000 were in arrears on the 8% cumulative preferred stock on February 11.

### Canadian Cottons Profit

For the fiscal year ended March 31 Canadian Cottons Ltd., operating cotton mills in Milltown, Marysville and St. John, N. B., and Cornwall and Hamilton, Ont., reports a net income of $447,313, as compared with $464,701 for the previous year. After preferred and common dividends the same as for the previous fiscal year a total of $12,383 was carried to surplus, which latter aggregated at the close of the year $2,749,946, as compared with $2,737,563 at the end of the previous fiscal year. A decrease of a little over $100,000 in operating profit was said to be due in large part to excessive competition from English and American mills, and the results from the year's operations might have been worse had the company not owned a considerable supply of cheap cotton.

The company's profit and loss figures for the last two fiscal years are as follows:

| | 1927-8 | 1926-7 |
|---|---|---|
| Operating profit... | $426,879 | $529,237 |
| Int. on invest.... | 174,240 | 92,467 |
| Total income..... | $601,119 | $621,705 |
| Bond interest..... | 145,651 | 148,324 |
| Balance ..... | $455,468 | $473,381 |
| Bad debts ..... | 6,155 | 8,680 |
| Net income ..... | $447,313 | $464,701 |
| Pfd. divs. ..... | 219,690 | 219,690 |
| Balance ..... | $229,623 | $245,010 |
| Com. divs. ..... | 217,240 | 217,240 |
| Surplus ..... | $12,383 | $27,770 |
| Prev. surplus .... | 2,737,563 | 2,709,793 |
| P. & L. balance.. | $2,749,946 | $2,737,563 |

### Industrial Rayon Capital Revision

Stockholders of the Industrial Rayon Corp., Cleveland, O., will meet at the New York office, May 25 and 26, for the purpose of acting upon recommendations of the board of directors involving a revision of the corporation's capital structure. There is now outstanding 598,000 shares of Class A stock and 2,000 shares of Class B stock, both of no par value, and only the latter having voting

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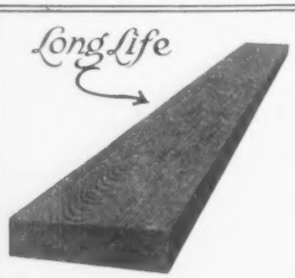


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# Financial—Continued

power and being at present held under a voting trust agreement by trustees. It is proposed to increase the number of Class A shares to 998,000 and then amend the certificate of incorporation to provide for a total authorized issue of 200,000 shares of one class of stock without par value, this to be issued to both A and B stockholders on the basis of one-fifth share for each share of A and B stock held as of May 12, all of the new issue to be voting stock. Stockholders will also be asked to authorize 104,600 shares of additional stock to be made available for corporate purposes including financing the construction of a new plant and working capital. Of the latter, 80,000 shares will be offered to stockholders for pro rata subscription at $80 a share and the balance will be sold to bankers under the terms of an underwriting agreement.

### Dominion Textile's Earnings

For the year ended March 31, the Dominion Textile Co., Limited, operating four cotton mills in Quebec and one in Ontario, reports earnings equal to $6.47 per share on the company's outstanding common stock, as compared with $7.36 per share in the preceding year. Operating income amounted to $1,532,487 as against $1,825,293 in the preceding year. Interest on investments and profit on sales of investments amounted to $371,345, making a total income for the year of $1,903,832. Deduction of bond interest at $310,320 left net income of $1,593,512. Preferred dividends amounted to $135,842 and common dividends to $1,125,000, leaving a surplus for the year of $332,670, as compared with $530,823 in the previous report. Previous surplus was brought forward at $6,529,987, leaving a profit and loss balance in the current report of $6,862,657. Working capital shows a small decline, excess of current assets over current liabilities standing at $8,331,322, as compared with $8,689,826 in the preceding report.

Sir Charles Gordon, president of the company, in his remarks to shareholders, said in part:

"Sales for the year amounted to $19,797,901, compared with $20,392,708 last year.

"The additions to the print works, referred to at the last annual meeting, have been carried out. Twenty printing machines are now installed, with space for additional machines. Practically all the new complementary machinery is in place and operating, and the balance of the machinery is being relocated to conform with the new plans and routing of cloth through process. This plant will now bleach, dye, print and finish any class of cotton, silk and artificial silk cloths up to sixty inches wide. During the first six months of the year all your plants ran to capacity but, owing to trade conditions and importations, the production during the last six months was reduced to between 75 and 50%, which latter is the basis of operation at present.

"During the year the Tariff Advisory Board reviewed the conditions in the cotton industry in Canada. We find it difficult to reconcile the facts laid before the board with recent tariff submitted by the Minister of Finance. The products of this company were given a reduction of from 2½ to 7½% under the general tariff, in addition to a number of reductions in the already inadequate preferential tariff."

### Financial Notes

The Consolidated Textile Corp., for the quarter ended March 31, reports a loss after interest, depreciation and all charges of $163,560, as compared with a net profit for the first quarter of the 1927 fiscal year of $119,398. Before charges there was a profit for the first quarter of this year of $84,962.

The Collins & Aikman Co., Inc., plush manufacturers, Philadelphia, Pa., and Bristol, R. I., at a meeting of the directors May 10, declared the regular dividend of $1.75 on the preferred stock, payable June 1 to stock of record May 22, but passed the dividend on the common stock. This action was necessitated by the provision in the certificate of incorporation for surplus of $1,500,000 against preferred stock. Since the announcement the stock touched a new low for this year of 76, as compared with a high earlier in the year of 111¾.

At a new low of 31 the 400,000 shares of Pacific Mills stock are selling in the open market for $12,400,000, or at something more than a 20% discount from its liquidating value, exclusive of plant and good will. This is based on an estimate that its net quick assets are no less than they were December 31 last, and which, after deducting the $16,000,000 note issue due in 1931, would leave a total net quick of over $15,000,000 available to stockholders. The book value of the plants at the end of the 1927 year was $47,419,604.

### Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

| Shrs. | Mill | Par | Price | Change |
|---|---|---|---|---|
| 78 | Ipswich, pfd. | 100 | 11½-13 | .... |
| 2 | Nashua, pfd. | 100 | *94½ | —1⅝ |
| 30 | Farr Alpaca | 100 | 125⅝ | +⅝ |
| 29 | Pepperell | 100 | 90⅝-91½ | +⅝ |
| 56 | Nashua, com. | 100 | 52⅜ | —2⅝ |
| 10 | Arlington | 100 | 41⅛ | +1⅛ |
| 14 | York | 100 | 21 | —3 |
| 35 | N. E. So. pfd. (Cert. of Dep.) | 100 | 75c | .... |
| 95 | Androscoggin | 100 | 83-86¼ | .... |
| 48 | National Fabric, com. | 100 | 32 | .... |
| 10 | Berkshire Cotton | 100 | 131 | .... |
| 14 | Naumkeag | 100 | 153 | .... |
| 16 | Wamsutta | 100 | 54 | —7¼ |
| 17 | Nashawena | 100 | 38½ | .... |
| 17 | Manomet | 100 | 4½ | .... |
| 10 | Ludlow | ... | 200 | .... |
| 2 | American Mfg., com. | 100 | 54¾ | .... |
| 146 | Plymouth Cordage | 100 | 75-74 | —1⅛ |
| 629 | Total. | | | |

*And div.

### Dividends Declared

| Mill | Pd. | Rate | Stock | P'y'ble | To stock of |
|---|---|---|---|---|---|
| Collins & Aikman. | Q. | $1.75 | Pfd. | June 1 | May 11 |
| Dartmouth | Q. | 1.50 | Com. | June 1 | May 14 |
| Dartmouth | Q. | 1.25 | Pfd. | June 1 | May 14 |
| Union | Q. | 1.50 | Pfd. | June 1 | May 1 |
| Union | Q. | .50 | Com. | June 1 | May 1 |
| Bristol | Q. | 1.50 | Com. | June 1 | May 14 |
| Wm. Carter Co. | Q. | 1.50 | Pfd. | June 15 | June 9 |

FOR SYNTHETIC YARNS

**No. 90 UNIVERSAL**

SKEIN-TO-BOBBIN WINDER

THE use of synthetic yarns, particularly as filling, has spread to such an extent that a large number of automatic and plain looms formerly using cotton filling are now weaving goods with synthetic yarn filling.

The increasing use of delicate fibres brought a real problem to the mills — how to get filling properly wound to meet their individual requirements.

Weaving mills could not contemplate shipping their empty bobbins to the producers of synthetic yarns to be filled, and the manufacturers of synthetic yarns could not be prepared to wind economically on this great variety of bobbins. In addition, most weaving called for bobbins with a bunch of synthetic yarn to be placed at the start of the winding at a proper location to function with the loom feeler motion.

The satisfactory solution of this problem came through weaving mills buying their synthetic yarns in skeins from the producers, and installing UNIVERSAL No. 90 WINDERS, with proper bunch builder attachments, and winding their filling direct from skein to bobbin to meet the mill's individual loom requirements.

See also CONSOLIDATED TEXTILE CATALOG

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# COTTON YARNS

## Blalock Regards Cotton Crop Prospects Poor

RALEIGH, N. C.—Prospects for a cotton crop over the entire belt are poor, according to U. B. Blalock, general manager of the North Carolina Cotton Growers Cooperative Association, who attended a meeting of the American Cotton Growers Exchange at Memphis last week.

"All sections are from two to four weeks late," he said, "and on account of so much wet and cold weather in a great many areas the planting must all be done over again. One cottonseed oil mill in Louisiana has shipped 70 carloads of seed into Texas for replanting purposes.

"As a matter of fact, good planting seed is scarce everywhere. Naturally, the planting of mill run seed is going to produce a badly mixed variety and staple of cotton.

"A few weeks ago there was almost every indication that in most of the States we would have an increase in acreage, with a heavy consumption of fertilizer, but it is the consensus now, with the lateness of the season, the necessity for planting over so much area, and natural abandonment that is sure to follow, that we will not have a very heavy increase in acreage."

## Yarn Selling Expenses Increase

### *Local Houses Criticise Commission-Cut Talk*

**Philadelphia.**

LOCAL commission houses take strenuous exception to a recent article in the daily press to the effect conditions in the yarn selling trade might be considerably improved if selling commissions could be substantially reduced. The article opened with the statement that, "It is indicated by discussions now current among yarn men that under certain conditions they believe the market would be benefitted and the spinners would be assured of steadier turnover and better net return if some arrangement could be made whereby selling commissions could be reduced substantially. The commission rate at present is nominally 5%. Except occasionally it is impossible for yarn distributors to count on getting full commissions."

**Commission Houses Object**

Several of the more important local houses, all having branch offices in other leading textile centers, have asserted that under present hand-to-mouth conditions the 5% commission now in effect should be increased rather than the reverse, in accordance with the above statement, in order to off-set additional expense that commission houses are now confronted with as compared with conditions several years ago when manufacturers were buying larger quantities at a time, with deliveries to be made over a longer period of time. Commission houses are emphatic in drawing a line of distinction between themselves and those concerns selling on a brokerage basis. The former do their own billing and in other respects have been compelled to render additional services to manufacturers as compared with those in the latter category.

Many point to increased selling expenses they are forced to meet under current conditions of the market. With manufacturers buying only small quantities at a time and being in the market much more frequently than in former times when forward buying was evident. Then many manufacturers covered their needs six months ahead, so that no further sales effort or expense was necessary until the end of that time. This situation necessitates the placing of additional sales representatives in other textile centers. It also means these additional salesman must make a larger number of calls on customers than in former years if they hope to obtain their share of the business now passing.

**Hand-to-Mouth Changes**

Goods buyers are operating on such a strict hand-to-mouth basis that manufacturers may be without business today and therefore not in position to buy further quantities of yarn and to-morrow may receive goods business unexpectedly which would necessiate an immediate purchase of yarn. To cover such a condition as this it has become imperative, for yarn salesmen make at least three times the number of calls as in former years to sell the same volume of yarn or in many instances a smaller poundage. This has been one of the most important increases in cost of doing business that commission houses have faced under hand-to-mouth buying and one of the main reasons they take such strenuous exception to the above quoted statement. Because of these

## Cotton Yarn Quotations

### Carded—(Average Quality)

**Double carded weav'g and knitt'g yarn 2c to 4c higher, according to quality**

**Single Skeins or Tubes—(Warp Twist)**

| | | | | | |
|---|---|---|---|---|---|
| 4s to 8s | — | —32 | 20s | 35 | —36 |
| 10s | 32 | —32½ | 24s | 37½ | —38 |
| 12s | 32½ | —33 | 26s | 38½ | —39 |
| 14s | 33 | —33½ | 30s | 39 | —40 |
| 16s | 33½ | —34 | 40s | 48 | —49 |

**Two-Ply Skeins and Tubes**

| | | | | | |
|---|---|---|---|---|---|
| 8s-2 | — | —33 | 26s-2 | 38½ | —39 |
| 10s-2 | 33 | —33½ | 30s-2 | — | —40 |
| 12s-2 | 34 | —34½ | 36s-2 | 46 | —47 |
| 14s-2 | 34½ | —35 | 40s-2 | — | —48 |
| 16s-2 | 35 | —35½ | 40s-2 High Breakage | — | —53 |
| 20s-2 | 36 | —36½ | 50s-2 | 58 | —59 |
| 24s-2 | 38 | —38½ | 60s-2 | — | —64 |

**Single Warps**

| | | | | | |
|---|---|---|---|---|---|
| 10s | — | —33½ | 24s | — | —38 |
| 12s | 33½ | —34 | 26s | — | —39 |
| 14s | 34 | —34½ | 30s | — | —41 |
| 16s | — | —35 | 40s | — | —49 |
| 20s | — | —36 | | | |

**Two-Ply Warps**

| | | | | | |
|---|---|---|---|---|---|
| 8s-2 | — | —33 | 24s-2 | — | —38½ |
| 10s-2 | 33 | —33½ | 26s-2 | — | —39 |
| 12s-2 | 34 | —34½ | 30s-2 | 40 | —41 |
| 14s-2 | 34½ | —35 | 40s-2 ordinary | — | —49 |
| 16s-2 | 35 | —36 | 50s-2 | 58 | —59 |
| 20s-2 | 36 | —37 | 60s-2 | 64 | —65 |

8s-3 and 4-ply skeins and tubes; tinged, 30-31, white, 32

**Hosiery Cones (Frame Spun)**

| | | | | | |
|---|---|---|---|---|---|
| 8s | — | —32 | 22s | 35½ | —36 |
| 10s | 32 | —32½ | 24s | 36½ | —37 |
| 12s | 32½ | —33 | 26s | 37 | —37½ |
| 14s | 33 | —33½ | 30s tying in | 37½ | —38 |
| 16s | 33½ | —34 | 30s regular | 39 | —39½ |
| 18s | 34 | —34½ | 30s extra quality | 40½ | —41½ |
| 20s | 35 | —35½ | 40s | 47 | —47½ |

### Combed Peeler—(Average Quality)

**Warps, Skeins and Cones**

| | | | | | |
|---|---|---|---|---|---|
| 20s-2 | 46 | —47 | 50s-2 | 59 | —61 |
| 30s 2 | 51 | —53 | 60s-2 | 65 | —67 |
| 36s-2 | 53 | —54 | 70s-2 | 75 | —77 |
| 40s-2 | 55 | —56 | 80s-2 | 85 | —88 |

**Singles**

| | | | | | |
|---|---|---|---|---|---|
| 12s | 40½ | —41½ | 30s | 49 | —50 |
| 14s | — | —42 | 38s | 52 | —53 |
| 16s | — | —42½ | 40s | 53 | —55 |
| 18s | — | —43 | 50s | 59 | —61 |
| 20s | — | —44 | 60s | 65 | —67 |
| 24s | 46 | —46½ | 70s | 75 | —78 |
| 28s | 48 | —48½ | 80s | 85 | —88 |

**Mercerized Cones—(Combed, Ungassed)**

| | | | | | |
|---|---|---|---|---|---|
| 26s-2 | 63 | —65 | 80s-2 | 1 09 | —1 11 |
| 30s-2 | 64 | —66 | | | |
| 36s-2 | 67 | —69 | **Singles** | | |
| 40s-2 | 69 | —71 | 30s | — | —80 |
| 45s-2 | 74 | —76 | 40s | — | —85 |
| 50s-2 | 76 | —78 | 50s | — | —90 |
| 60s-2 | 85 | —87 | 60s | — | —1 03 |
| 70s-2 | 97 | —99 | 70s | — | —1 17 |
| | | | 80s | — | —1 48 |

### Peeler—(Super Quality)

**Single Cones**

| | Carded | | Combed | | | Carded | | Combed | |
|---|---|---|---|---|---|---|---|---|---|
| 10s | 35 | —36 | 45 | —47 | 26s | 40 | —41 | 53 | —54 |
| 14s | 36 | —37 | 46 | —48 | 30s | 41 | —42 | 55 | —57 |
| 16s | 36½ | —37½ | 48 | —49 | 36s | 46 | —47 | 58 | —60 |
| 18s | 37 | —38 | 49 | —50 | 40s | 50 | —52 | 60 | —62 |
| 20s | 37½ | —38½ | 50 | —51 | 50s | — | — | 67 | —70 |
| 24s | 39 | —40 | 52 | —53 | 60s | — | — | 72 | —75 |

**Combed Cones, Warps and Tubes**

| | | | | | |
|---|---|---|---|---|---|
| 20s-2 | 50 | —52 | 40s-2 | 60 | —62 |
| 24s-2 | 52 | —54 | 50s-2 | 67 | —69 |
| 28s-2 | 54 | —56 | 60s-2 | 72 | —75 |
| 30s-2 | 55 | —57 | 70s-2 | 82 | —85 |
| 36s-2 | 58 | —60 | 80s-2 | 1 00 | —1 05 |

**Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones, 2, 3, and 4-ply**

| | Peeler | | Sakelarides | |
|---|---|---|---|---|
| | Average | Best | Average | Best |
| 24s | —58 | —64 | 92 | 97 |
| 30s | —61 | —66 | 95 | 1 00 |
| 36s | —63 | —68 | 97 | 1 01 |
| 40s | —68 | —73 | 1 02 | 1 07 |
| 45s | —73 | —79 | 1 07 | 1 12 |
| 50s | —78 | —83 | 1 12 | 1 17 |
| 60s | —88 | —93 | 1 22 | 1 28 |

Quotations are average prices of the counts and qualities indicated at the close of business May 16. They do not cover lower or higher qualities unless specifically noted. For New York spot cotton prices, see page 77. For staple cotton prices, see page 79

# ABERFOYLE MANUFACTURING COMPANY

# MERCERIZED YARNS

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HIGH POINT, N. C.

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323 So. Franklin St.
CHICAGO, ILL.

122 East 7th St.
LOS ANGELES, CAL.

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MILLS
CHESTER, PA. BELMONT, N. C.

# Cotton Yarns—Continued

and other reasons set forth they are unanimous in terming this statement as "too ridiculous to discuss seriously."

A majority of houses report a fairly active month to date although the last week has been less so than the previous one, which many termed the best so far experienced this year. In this connection it is recalled many carded and combed houses here stated that April was the best month this year and only a small poundage less than the corresponding month last year, while one of the largest dealers in combed yarns has asserted that April was the largest month they have had in a year. The spurt in combed yarns occurred more than three weeks ago and has cleaned out more than 4,000,000 lbs. of combed stocks in spinners' hands according to recent reports. It is mainly because of this that combed spinners during that time were able to raise prices several cents, it no longer being possible, for example, for mercerizers to buy 58s-2 at 58c to 60c as at that time and they are now compelled to pay at least 63c to 65c. Weavers are, forced to pay even higher figures and sales of that count have been reported this week in warp twist at 67c.

### Good Knitting Inquiry

In the carded section most active trading during the last three weeks has been in knitting yarns, a number of fair sized to large contracts having been placed at 31c basis 10s for a yarn slightly above the average. During the last week, while trading has been less active with knitters, sales have been reported at 32c basis 10s for an extra-quality yarn. Deliveries on such contracts have been for May and June with few running into July although previously it had been noted that several knitters had placed business to be delivered later than July.

Although weaving yarns are far from active there has also been a freer movement during the last two weeks, more apparent last week than this. Plush manufacturers have been taking in small to medium sized new contracts and have in addition been specifying more actively, although yarn men do not anticipate any sustained spurt at this time as it is remembered this is the end of their season. Other weavers in this vicinity are in need of new business and many mills are not running more than 30% of their looms. Under such conditions manufacturers are not taking large quantities at a time, filling-in orders being the rule with towel, tape, upholstery, carpet and other lines here.

## Chattanooga Yarn Market Is Quieter

CHATTANOOGA, TENN.—The local yarn market suffered a recession from the comparatively brisk activity of the previous two weeks during the week ending May 12, inquiry among local brokers indicates. The market was rather quiet during the week and the volume of business booked fell short of both of the two previous weeks.

Thrown silk took a tumble during the period. During the week it sold at prices ranged about 10c or so below the previous week. The price basis as the week closes is reported at from $5.90 to $6 a pound. No other changes of importance were noted in the price of cotton yarns.

Mercerized 60s-2 are at 85c and 20s-2 at 21c, while 80s-2 are listed at $1.09. Tens carded cones are bringing from 32½ to 33½c while 20s are quoted at 35½ to 36½c. In the combed singles field 18s are quoted at 43 to 44c and 73s at 73 to 75c.

## Demand Slumps

### Moderate Price Concessions Fail to Stimulate Business

**BOSTON.**—The slump in demand for cotton yarns noted last week has increased in intensity and this week has approached about as close to the stagnation point as is possible for a market on a commodity of such varied use and staple character. It was the general opinion last week that the considerable advance in prices of cotton futures and the more moderate advance in yarn prices were responsible for checking demand, but after testing out buyers with concessions of from one-half to one cent on medium and coarse yarns, and obtaining no response of consequence, the trade is not so certain that this is chiefly responsible for forcing buyers out of the market.

Dealers, at least, have awakened to the fact that there has been no improvement in yarn consumption while cotton and yarn prices have been advancing, but that, on the other hand, there has been a co-incident decrease in business with some large users of yarns. The plush, narrow fabric, cotton worsted and insulated wire trades have suffered a marked decrease in activity, while no trade that is a large user of cotton yarn has improved its position during this period. Most buyers claim to be well covered to July 1, and in many cases through the summer months. For the first time in a long period there is much comment in the market regarding large stocks of yarn accumulated at southern mills, and of substantial stocks in northern yarn centers; figures are quoted, but are so lacking in confirmation as not to warrant repetition.

The slump in demand is almost as acute on combed as on carded yarns and prices are approximately as weak. Whereas the decline on medium and coarse count carded yarns averages at least one-half cent and is occasionally as much as one cent a pound, on combed yarns it averages one cent and is occasionally as much as two cents on the finer counts. The amount of busi-


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8s to 30s Extra Carded

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PROVIDENCE, R. I.

# COTTON PRODUCTS COMPANY

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*Sole Selling Agents*

*for*

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*Combed Peeler Yarns*
24's to 40's

A. M. SMYRE MFG. CO.
Gastonia, N. C.
*Combed Peeler Yarns*
50's to 80's

SOUTHERN MERCERIZING CO.
Tryon, N. C.
*Single Mercerized Yarns*

GEORGE H. WATERMAN, *President*, BOSTON
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# COTTON YARNS

## CARDED AND COMBED YARNS

In Standard Descriptions

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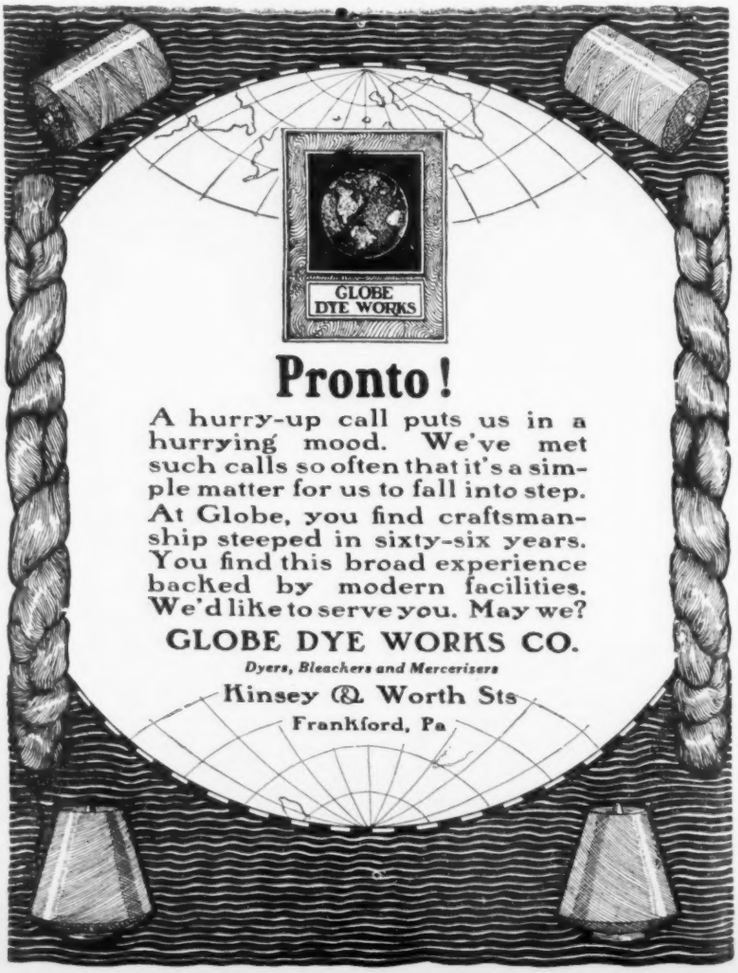
CHARLOTTE, Commercial Bank Bldg.

*Non-conflicting accounts solicited*

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**GLOBE DYE WORKS CO.**
*Dyers, Bleachers and Mercerizers*
Kinsey & Worth Sts
Frankford, Pa

## Cotton Yarns—Continued

ness that has been put through at these lower prices, however, is so small that quotations remain purely nominal.

Another factor that has weakened the price position of carded yarns, and that has encouraged buyers to delay operations, was the apparently official report published early in the week to the effect that an announcement of the completion of the carded yarn merger would be made public in the near future. Just why this should have been interpreted by yarn users as a bearish price factor is rather difficult to fathom, but that is their reaction and it probably is based upon the belief that competition for their business will increase if the merger becomes operative.

# Buyers Somewhat More Nervous

### *Detection of Increased Apprehension Only New Feature in Market*

**New York.**

ALTHOUGH the volume of cotton yarn business has not improved materially, nor have prices represented satisfactory levels, a better feeling has developed in certain quarters of the local market. This is based primarily upon the detection of an increased attitude of nervousness on the part of buyers.

Yarn consumers have displayed in recent weeks a spirit of apathy which nullified the effect of raw material advances. This indifference was due partly to the unsatisfactory conditions in their own trades and partly to a sincere distrust of existing levels.

This week, however, there were sufficient indications of apprehension in buying circles to encourage sellers. Certainly it was not due to any noticeable improvement in the goods market. It is traced more directly to a growing belief in the inherent firmness of the present raw material situation.

Even during the recession met on Saturday of last week and Monday of this week, this attitude of nervousness was apparent. It is evident that cotton reacts much more quickly nowadays to bullish tendencies than to bearish ones. A slight indication of unfavorable weather will have a far more pronounced effect than will decidedly pessimistic news from the goods market.

Feeling, as they do, that the probable trend of cotton will be upward, many sellers count on any sufficiently prolonged firmness to change the character of the yarn market. The trade is sensitively poised and should react to such an influence. Buyers should be impelled to cover, and yarn prices should appreciate more proportionately to raw material movements. It is this belief which is responsible for the better tone at present.

Despite conflicting reports about stocks, the best information is that the amounts carried have been very low and that immediate lots of yarns could now command a premium. As a matter of fact, irrespective of the consideration of the yarn code, there has been little incentive in recent weeks for the carrying of stocks. Buyers have not been sufficiently interested—and the risk has been too great.

From a general market standpoint, no one branch of the consuming trades has reflected any marked increase in interest. The weavers and the knitters have maintained their cautious attitude so far as actual purchases have been concerned—and it has only been this rather indefinite trend toward greater apprehension that may be considered a new feature.

## Firmer Waste Market

### Demand Rather Spotty but Prices Fully Maintained

**BOSTON.**—The cotton waste market is steady. Sellers of most wastes are able to get slightly better prices and the percentage bases on comber and strips show an advancing tendency. The character of the consuming demand is without change. In the Manchester market some kinds of wastes are said to be in good supply and this allows the American importer a little leeway in making a fair price on his purchases. In general the trend in waste prices is upward the continued strength in cotton being a favorable factor. In New Bedford, the chief source of good comber, the strike situation is still unsettled and indications are that it will be a long drawn-out affair.

Consumers are not likely to see much lower prices for some time to come in the general opinion of leaders in this market. The strip situation continues very firm, and all kinds are selling in moderate quantities, at firm prices. Comber is steady. The domestic demand is fair but the export demand is poor.

The chief demand is shown on materials for spinning, covering comber, Sak., Egyptian and domestic, peeler strips, No. 1 Upland strip, tinged strips, vacuum strips, spinnable fly and spinning grades of linter. In the thread stocks, machiners of wiping wastes are only moderately busy and the call for white and colored threads has been insufficient so it is said, to allow these commodities to share in the advance in the raw material. Single spooler and fine white cop for shoddying are in small supply with prices firm. The bedding stocks are in slow demand. The market for these materials is quiet but stable. The price relation between picker and competitive grades of linter has apparently been adjusted. In sweeps there is some movement around 50c

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## TRYON, NORTH CAROLINA

*Our Specialty—*
SINGLE Mercerized

Yarn for Splicing and Plaiting

Single Mercerized Yarns up to 100/1—Also Two Ply Mercerized 100/s to 140/s
Tinted yarns Licensed under Patent No. 1,496,696.

*Wire or write us for prices and samples*

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Sole Selling Agents for United States and Canada
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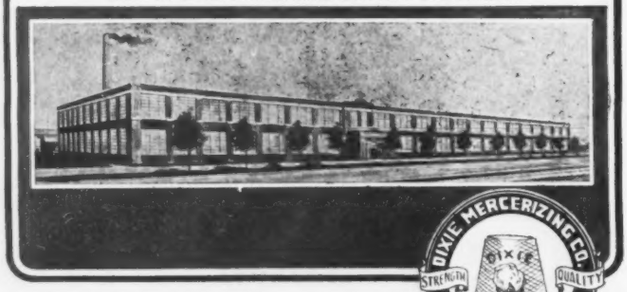

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## DIXIE YARNS MEET EVERY TEST!

*Spinners and Processors*
NATURAL—DYED
GASSED—BLEACHED
AIR DRIED
**MERCERIZED YARNS**
SINGLE OR PLY
CONES—SKEINS
COPS—TUBES
PARTICULARLY ADAPTED FOR THE KNITTING AND WEAVING TRADE

Through **Controlled Manufacture,** Dixie produces yarns of such strength and uniformity as to best meet every test and every requirement of the knitting and weaving trade.

**DIXIE MERCERIZING CO.**
MAIN OFFICE AND PLANTS
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**DIXIE MERCERIZED YARNS**

# Harriet—Henderson

Two names that are the equivalent of sterling in yarn buying. Among a host of mill men these are more than just names. They are representative of yarns whose quality is consistently high.

*6s to 30s — Single and Ply*
Skeins, Cones, Tubes, Ball and Chain Warps
for KNITTING and WEAVING

HARRIET COTTON MILLS
HENDERSON COTTON MILLS
Henderson, N. C.

*Selling Agents*
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Philadelphia Office—39 S. Tenth St.

## Cotton Yarns—Continued

for weaveroom and 2½-3c for cardroom sweeps.

Cotton has recovered some of its recent decline and is likely according to some good opinion to reach higher prices in the near future. At 22c the price is said to have discounted a 15 million bale crop. From now on the price of cotton and incidentally and unfortunately the price of waste will be subject to the usual speculative fluctuations brought about by changes of opinion in the New York Cotton Exchange. Exports of cotton waste from New York for March amounted to 818,000 pounds. The largest amount went to England, 497,000 pounds at 18¾c then to Italy 69,000 pounds at 14. Small consignments probably wiping wastes went to 29 other foreign countries.

### Current Quotations

| | |
|---|---|
| Peeler comber | 18½—19½c. |
| Peeler strips | 17½—18c. |
| Sak. comber | 17 —17½c. |
| Choice willowed fly | 9½—10c. |
| Choice willowed picker | 6½— 7½c. |
| Sak. strips | 20 —21c. |
| Linters (mill run) | 5½— 6c. |
| Spoolers (single) | 12½—13c. |
| Fine White cop | 14 —14½c. |

## Chattanooga Golf Meet

### Invitations Out for Yarn Men's Two-Day Outing

CHATTANOOGA, TENN.—Invitations to the annual two-day golf tournament and outing of the Chattanooga Yarn Men's Association have been put in the mails and were received by some 200 textile manufacturers over the country during the week. The tournament will be staged at the beautiful Chattanooga Golf and Country Club on May 24 and 25, the special guests being the hosiery and underwear manufacturers.

As usual the invitations are unique. The front page of the folder contains a cartoon in which well known textile men are depicted. On the inside are announcements about the tournament, news of interest, and a list of officers of the yarn association which is headed by Wilbur Lawson.

Mr. Lawson predicts that the tournament is going to be the most largely attended of any of the annual events. This is not unusual, however, for attendance increases every year. The play is for 36 holes, 18 each day. A banquet the night of May 25 will be a big feature of the tournament. It is then that the handsome trophies to contestants in the tournament will be presented. The golf tournament is unique in that those who can not play golf apparently have just as good a time as the experienced players and they have a chance at special prizes.

## Asks Bids on Dam Across Flint River, Ga.

CORDELE, GA.—Bids for the construction of the $1,250,000 hydro-electric power dam, across Flint river, west of here, were asked last week by the Crisp Power Commission. Plans call for a reinforced concrete and steel dam, a power house, and two 3,600 h. p. vertical generators. The bids will be opened on July 10.

## Obituary

### William Martin

William Martin, a founder with his brother Thomas of the firm of T. Martin & Brother, narrow fabric manufacturers, Chelsea, Mass., which was later merged in Everlastic Inc., and who retired from active business about 1910, died at his residence in Winchester, Mass., May 9, aged 85 years. He was born in Leicester, Eng., December 26, 1842, and came to this country in 1862 engaging in the manufacture of blanket webbing in Easthampton, Mass. He is survived by three sons and two daughters, and one of his sons, Walter L. Martin, is secretary of Everlastic Inc.

### Benjamin C. Smith

Benjamin C. Smith, general manager and secretary at the Broadalbin (N. Y.) Knitting Co., died last week in his office following an attack of heart disease. Born in Broadalbin 59 years ago, Mr. Smith has played a prominent part in the growth of that place and largely through his efforts the business of the Broadalbin Knitting Co. has expanded to its present size. Following his graduation from Cornell, he entered the employ of the firm as bookkeeper from which position he rose rapidly. He was a prominent factor in the municipal and educational life of Broadalbin.

### Rufus Gray Merritt

Rufus Gray Merritt, aged 34, manager of the export department of the Hunter Mfg. & Commission Co., New York, who died in New York City, was buried at Greensboro, N. C., his native city, last Saturday. Mr. Merritt was a son of the late J. W. Merritt. During the world war he was a lieutenant in the army quartermaster corps. He is survived by his mother and a brother, J. Bynum Merritt, of the Iselin-Jefferson Co., New York.

### William Rufus Davenport

William Rufus Davenport, formerly associated with the Mason Machine Works, Taunton, Mass., and the New England Cotton Yarn Co., and more recently in the banking business in New York, lately with the firm of Spencer, Trask & Co., died suddenly May 11, at his home in Rye, N. Y. He was born in Taunton, Mass., May 10, 1884 and was graduated from Amherst College in 1906.

### Joseph B. Bruner

Joseph Berry Bruner, member of the firm of James L. Wilson & Co., New York, died late last week. He was 79 years of age and was connected with the textile industry during his entire business career being associated with James L. Wilson & Co. for over 40 years. Mr. Bruner was born in Philadelphia and one of his early connections was with James W. Cook & Co., of that city, and Baltimore.

### George Edgar Brightson

George Edgar Brightson at one time a partner in the old firm of Sweetser & Pembroke, and also a department head in the old H. B. Claflin Co., was killed in a street accident in New York last week. After leaving the textile field Mr. Brightson founded the Sonora Phonograph Co. from the presidency of which he retired three years ago.


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# COTTON

## Cotton Market Steady

### *Weather Has Shown Some Improvement, but Many Complaints of Poor Stands*

THE action of the cotton market during this week has reflected continued nervousness over the coming crop outlook. In a general way the weather has been better on the average, but it is doubtful whether the crop has made any marked recovery. Replanting has made good progress, no doubt, but the temperatures have been low and there have been quite general reports of poor germination and poor or irregular stands. Moreover the rains over the week-end which were beneficial in west Texas, extended into the central belt where such heavy precipitation was not wanted and created a sufficient buying power on Tuesday to send prices up above the 21c level for July contracts. The demand tapered off at the advance, however, and the market sagged off again during the middle of the week under realizing or liquidation.

On the whole, the market has acted much as if it were inclined to wait for something more conclusive in the way of crop developments at prices ranging about 50 points either way from the 21c level. At this stage of the season, the trade is confronted by the two fundamental uncertainties in the new crop outlook; first that of the acreage, and second that of the probable yield per acre. It can hardly be said that the developments of the last month have brought the average trader any nearer a firm view of the area likely to be planted. The next two or three weeks ought to pretty well determine the question, but reports concerning it will probably be more or less conflicting, and in some sections of the South, cotton can be planted up to about the middle of June, with a possibility of reaching maturity. Private advices concerning acreage reaching the trade recently have all pointed to an increase, but the figures ranging from about 3 to nearly 10%, cover a pretty wide range. Possibly a majority in the trade thinks it is likely to be between 5 and 6%. This view of the acreage is one, which combined with prevailing conceptions of the world's requirements, points to the need for a yield per acre somewhat in excess of the five-year average. Following the unfavorable weather of April and the delay of perhaps two to three weeks in the new crop start, such preconceived ideas of the world's requirements naturally emphasize all the hazards of the growing season.

The figures of the Census Bureau on consumption in this country for the month of April making it 525,158 bales excluding linters against 581,318 for March and 618,279 for April last year, were below expectations, but as yet, at least, there has been no apparent disposition materially to scale down estimates of this season's consumption as a world-wide proposition or of next year's probable needs.

The following table shows Wednesday's closing quotations in the leading spot markets of the country, with the usual comparisons:

| Market | May 9 | May 16 | Ch'ge | Last year | Sales |
|---|---|---|---|---|---|
| Galveston | 21.20 | 20.85 | —35 | 15.85 | 3,686 |
| New Orleans | 21.05 | 20.60 | —45 | 15.43 | 8,102 |
| Mobile | 21.00 | 20.60 | —40 | 14.85 | 587 |
| Savannah | 21.18 | 20.81 | —37 | 15.26 | 274 |
| Norfolk | 21.31 | 20.81 | —50 | 15.25 | 1,492 |
| New York | 21.85 | 21.55 | —30 | 15.80 | 246 |
| Augusta | 21.19 | 20.81 | —38 | 15.13 | 960 |
| Memphis | 20.40 | 20.05 | —35 | 14.75 | 9,450 |
| St. Louis | 21.00 | 20.75 | —25 | 14.25 | ..... |
| Houston | 21.10 | 20.70 | —40 | 15.55 | 9,426 |
| Dallas | 20.60 | 20.25 | —35 | 14.70 | 11,403 |

The following differences on and off middling are given as compiled from the report received by the New York Cotton Exchange. The cotton grades marked ** are not deliverable on contract.

| | Dallas | Memphis | Montgomery | Augusta | Average |
|---|---|---|---|---|---|
| **WHITE GRADES** | | | | | |
| M.F | 1.00† | 1.00† | .70† | .94† | .90† |
| S.G.M | .65† | .75† | .55† | .75† | .64† |
| G.M | .40† | .40† | .40† | .38† | .39† |
| S.M | .30† | .25† | .25† | .25† | .25† |
| S. L. M | .40* | .25* | .38* | .25* | .32* |
| L.M | .90* | .50* | .88* | .50* | .71* |
| S.G. O ** | 1.90* | 1.10* | 1.38* | 1.00* | 1.36* |
| G O | 2.75* | 1.85* | 2.00* | 1.75* | 2.11* |
| **YELLOW TINGED** | | | | | |
| G M | .25* | .25* | .40* | .25* | .30* |
| S M | .50* | .75* | .65* | .50* | .63* |
| M.** | 1.25* | 1.00* | 1.25* | .75* | 1.06* |
| S. L. M.** | 2.00* | 1.50* | 1.75* | 1.38* | 1.63* |
| L. M.** | 2.75* | 2.25* | 2.50* | 2.38* | 2.35* |
| **YELLOW STAINED** | | | | | |
| G. M | 1.00* | 1.00* | 1.00* | .75* | .93* |
| S. M.** | 1.75* | 1.25* | 1.50* | 1.50* | 1.59* |
| M.** | 2.75* | 1.50* | 2.25* | 2.00* | 2.25* |
| **BLUE STAINED** | | | | | |
| G. M * | 1.75* | 1.50* | 1.50* | 1.75* | 1.53* |
| S. M.* | 2.25* | 2.00* | 2.25* | 2.50* | 2.15* |
| M.** | 3.00* | 2.50* | 3.00* | 3.50* | 2.92* |

* Off middling. † On middling.

### Cotton Statistical Data

**(Fluctuations of Futures)**

| | Closed May 10 | For Week High | For Week Low | Closed May 16 | Net Ch'ge |
|---|---|---|---|---|---|
| May | 21.45 | 21.74 | 20.88 | 21.07 | —.38 |
| June | 21.35 | 21.45 | 20.93 | 20.94 | —.41 |
| July | 21.25 | 21.51 | 20.62 | 20.81 | —.44 |
| August | 21.24 | 21.34 | 20.79 | 20.80 | —.44 |
| September | 21.23 | 21.45 | 20.77 | 20.78 | —.45 |
| October | 21.21 | 21.50 | 20.54 | 20.76 | —.45 |
| November | 21.15 | 21.28 | 20.68 | 20.70 | —.45 |
| December | 21.09 | 21.38 | 20.42 | 20.64 | —.45 |
| January | 21.00 | 21.30 | 20.37 | 20.55 | —.45 |
| February | 21.00 | 21.08 | 20.55 | 20.54 | —.46 |
| March | 21.00 | 21.29 | 20.38 | 20.54 | —.46 |
| April | 20.99 | 21.07 | 20.54 | 20.52 | —.47 |

### Spot Fluctuations for Week

**(Middling)**

| | New York | N. Orleans | Liverpool |
|---|---|---|---|
| Friday, May 11 | 22.05c | 21.23c | ..... |
| Saturday, May 12 | 21.85c | 20.93c | ..... |
| Monday, May 14 | 21.55c | 20.61c | ..... |
| Tuesday, May 15 | 21.75c | 20.78c | 11.50d |
| Wednesday, May 16 | 21.55c | 20.60c | 11.53d |
| Thursday, May 17 | 21.95c | 20.95c | 11.44d |

### Spot Fluctuations and Stock

| | Prices May 16 | Stocks This week | Stocks Last year |
|---|---|---|---|
| Galveston | 20.85 | 291,509 | 334,547 |
| New Orleans | 20.60 | 342,203 | 482,286 |
| Mobile | 20.60 | 11,487 | 22,144 |
| Savannah | 20.81 | 224,412 | 66,064 |
| Norfolk | 20.81 | 56,907 | 72,368 |
| New York | 21.55 | 113,469 | 233,618 |
| Houston | 20.70 | 447,384 | 492,630 |
| Augusta | 20.81 | 54,012 | 77,039 |
| Memphis | 20.05 | 167,912 | 161,097 |
| St. Louis | 20.75 | 3,457 | 4,543 |
| Little Rock | 20.60 | 9,702 | 23,179 |

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**Starch**

# Cotton—Continued

## Little Spot Demand

### Southern Markets Do Not Seem to Reflect Futures Activity

MEMPHIS, TENN., May 14.— Fact that recent activity in cotton futures has not been reflected in demand for spots is a matter of puzzled comment here. Some business has been put through on lengths up to 1 1/16" and on the extra long staples but there has been practically no demand for staples of intermediate lengths; the supply of descriptions wanted is very limited. Little cotton is being sold on basis; where the flat price suits the seller he lets it go regardless of the basis. In this the situation has not changed since the previous week, although offerings of cotton in disregard of basis are much more limited. All of it was, or is, in the hands of people, mostly first hands who did not have their cotton hedged or who attained an advantage by hedging and removing the hedges at a lower level.

Quite naturally the condition named has been against any improvement in basis, which is at the low point of the season. Hope for improvement in basis lies in the belief that practically all of the flatpriced cotton has come out. Merchants own most of the stock here and nearly all of it is middling or better staples. There is a fair outward movement on old commitments but new business, although slightly more active, is far from satisfactory. Mill ideas as to prices are, as a rule, considered unworkable, which limits business. The few orders being booked are for small lots. There has been some inquiry for new crop deliveries and there are some fairly well substantiated rumors that a small amount of this business has been done. The basis has not been divulged but it is known that some mills were trying to buy on the basis which has prevailed recently. Most shippers and exporters are discouraged from offering or accepting forward business by new crop prospects.

Weather conditions are more favorable but the crop is just now getting well started and is therefore from two to three weeks late; the late start is a distinct handicap in the event of heavy boll weevil infestation. Temperatures were unfavorably low early in the week, with light frost in some northern localities; further rains in Georgia and South Carolina were unfavorable. Rains in western Texas were beneficial but inadequate. Cotton is coming up to fairly good stands over most of the Memphis territory but what with cold soil and cool nights the appearance of the plant is not good.

## Staple Basis Lower

### Slight Improvement in Demand—Egyptians Also Decline

BOSTON, MAY 16.—Demand for extra staple cottons from mills outside of New Bedford has improved in a small way, partly as a result of slightly lower basis and futures and partly because some of these outside mills are getting a little business diverted from New Bedford. Even in the South, however, demand for extra staples is sluggish, particularly from the combed yarn mills. While few shippers are attempting to force sales, not many of them are missing opportunities to sell because of a difference of 25 to 50 points between them and manufacturers in their ideas of basis. As a result, the weakness noticed last week has developed into a quotable decline of at least 50 points on extra staples shorter than full 1¼ in., but on premium cottons shorter than 1⅛ in. the market is not off more than 25 points, or about in proportion to the decline in futures.

A little interest has been reported in Pima cottons on a basis of about 50c for No. 2s and with little offered. Top grades of Sudan and Egyptian Sak. are also occasionally inquired for, with very little available and with prices practically unchanged. Notwithstanding the comparative firmness of the domestic futures markets, the Alexandria market has developed substantial weakness on new crop Sak. with a decline of $1.08 for the week in the November option to a closing today of $42.64. The June and October Upper options are both off 73c for the week, while the May Sak. option at $41.77 is off only 40 points.

### Current Quotations

Average prices for May-June shipment of middling and strict middling hard western cotton (government lengths) are as follows:

| | Middling | St. Middling |
|---|---|---|
| 1 1/16 in. | 24 to24½c. | 24½to25c. |
| 1 1/16 in. to 1⅛ in. | 24¼to24⅝c. | 24⅝to25¼c. |
| 1 ⅛ in. | 24½to25c. | 25 to25½c. |
| 1 3/16 in. | 26 to26½c. | 26½to27c. |
| 1 ¼ in. | 29½to30½c. | 30 to31c. |

Basis on N. Y., July, 29.81c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for May-June shipment as follows: Medium Sakelarides, 41c. off 3/8c; Medium Uppers, 30½c., off 1c.; from May 9. They report closing prices May 16 on the Alexandria exchange as follows: May Sak. $41.77, off 40c., June Uppers $28.02, off 73c. from May 9.

## Market Statistics

### Basis Middling

| | Saturday, May 11 | Saturday, May 5 |
|---|---|---|
| 10 markets average | 21.03 | 20.31 |
| Memphis | 20.60 | 19.90 |

### Premium Staples

First Sales from Factors Tables at Memphis

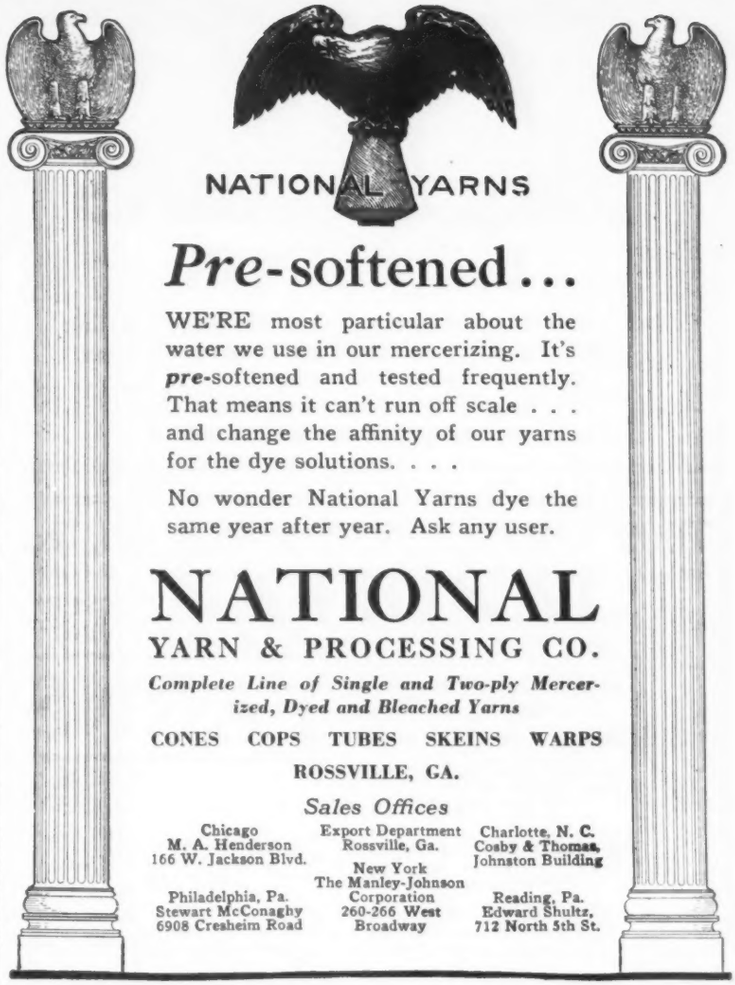
| Grade Strict Middling | Prices nominal |
|---|---|
| 1⅛-in. | 23½@24c |
| 1 3/16-in. | 24¼@24⅝c |
| 1¼-in. | 26 @26½c |

### Current Sales

| | For week | Prev. week | Week before |
|---|---|---|---|
| Memphis total | 12,226 | 13,025 | 12,150 |
| F. o. b. included in total | 8,975 | 9,150 | 6,450 |
| 10 markets | 43,076 | 60,731 | 65,854 |

### Memphis Receipts, Shipments, Etc.

| | For week | Last year | Year before |
|---|---|---|---|
| Net receipts | 3,743 | 10,628 | 4,347 |
| Gross receipts | 12,334 | 31,309 | 23,175 |
| Total since Aug. 1, net | 648,081 | 773,330 | 727,204 |
| Shipments | 21,094 | 32,569 | 27,046 |
| Total since Aug. 1 | 1,329,895 | 2,150,825 | 1,576,553 |
| Total stock | 172,400 | 167,475 | 256,727 |
| Decrease for week | 8,760 | 1,268 | 3,871 |
| Unsold stock in hands of Memphis factors | 41,250 | 59,000 | 85,000 |
| Decrease for week | 2,750 | 500 | 1,000 |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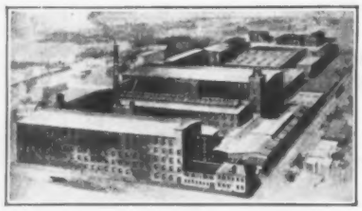

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| TOPS | | YARNS |
|---|---|---|
| W. C. GAUNT & CO. | | PERCY A. LEGGE |
| 212 SUMMER ST. BOSTON | 53 S. FRONT ST. PHILADELPHIA | 134 CHESTNUT ST. PHILADELPHIA |

## TOULSON YARNS, INC.

Bridgeport, Conn.

***Novelty Yarns***

*of Every Description*

FA QUALITY

## *ELASTIC*

FOR - EVERY - PURPOSE

MADE FROM FRESH LIVE RUBBER

WASHABLE - LONG STRETCH - LONG LIFE

## FRIEDBERGER - AARON MFG. CO.

*18th & Courtland Sts.,* *Philadelphia, Pa.*

## O. J. CARON

WORSTED AND WORSTED MERINO YARNS
222 WEST ADAMS ST., CHICAGO

## THE YEWDALL & JONES CO.

Manufacturers of **WORSTED YARNS**

In the gray and in all colors; also fancy mixtures and double and twist.

PHILADELPHIA, PA.

RAYON TOP MAKERS

## JOHN R. STEWART CO.

241 CHESTNUT ST., PHILA., PA.

NEW ENGLAND REPRESENTATIVES.

SCOTT D. STONE, INC. 210 SUMMER ST., BOSTON, MASS.

## WILLIAM RYLE & CO.

381 Fourth Ave. New York
Cor. 27th Street

**Thrown Silk Yarns**

For Silk, Woolen Worsted Cotton and Knitting Mills

## GARTH MFG. CO.

RAYON SILK TOPS, NOILS AND CARDED STOCK

For Knitting and Weaving Yarns

Tel. 4611 Passaic

72 Summer Street, Passaic, N. J.

## Star Worsted Company

YARNS

FITCHBURG MASS.

## JOS. M. ADAMS COMPANY

Manayunk, Philadelphia, Pa.

Spinners of

**WORSTED YARNS**

Bradford System
for Weavers and Knitters

## Rockwell Woolen Co.

Leominster, Mass.

Manufacturers of

WOOLEN and MERINO **YARNS**

FOR WEAVING and KNITTING

Heather a Specialty Mixtures and Decorating Yarns

# WORSTED YARNS

## Further Strength In Medium Tops

### High ¼ Blood 50s Sell at $1.17½ with $1.20 in Prospect—Boston Noil Stock Low

**BOSTON.**—The week in wool tops has been featured by further strength in medium qualities signalized by high ¼ blood 50s selling at $1.17½ an advance of 2½c with the market quotation now lifted to $1.18-$1.20. At this latter price it is said new clip wools will be utilized and that any lower price cannot be expected. Business was placed in high and low ⅜s bloods at advances of 1c per pound. Further business came into the market on fine and ½ blood tops at $1.45 and $1.40 respectively. The large contract noted last week in fine French combing around $1.37 was taken mainly it is said by two or three combers very desirous of keeping their machinery running. One large house which refused to accept business on the low basis offered has during the week taken orders on a similar grade of top at $1.42½.

Although some factors believe the noil market to be a trifle easier in price owing to limited mill demand, dealers looking around for good cheap materials meet with little success. Larger business could unquestionably be done if values were not so high and yet contractors who paid stiff prices a month ago must maintain a strong high market if any reasonable profit is to be made. The foreign markets are all firm and high, especially so in Bradford. The German market also has had a substantial rise since the first of the year. Boston stocks March 31 amounted to 720,000 pounds and Philadelphia stocks 1,445,000 pounds.

### Top and Noil Quotations

Tops—Boston

| | | |
|---|---|---|
| Fine | (64-66s) | $1.45 |
| Half-blood | (60-62s) | 1.38/1.40 |
| High ⅜ blood | (58s) | 1.28½/1.30 |
| Aver. ⅜ blood | (56s) | 1.26 /1.27 |
| Low ⅜ blood | | 1.20 /1.21 |
| High ¼ blood | (50s) | 1.18 /1.20 |
| 48s N. Z. | | 1.10 |
| 46s S. A. | | 1.07/1.08 |
| 44s | | 1.00 |
| 40s | | .92/ .93 |
| 36s | | .92/ .93 |

Tops—Bradford, Eng. (May 5)

| | | |
|---|---|---|
| Fine | (70s) | 57d |
| Fine | (64s) | 55½d |
| Half-blood | (60s) | 53½d |
| Half-blood, low | (58s) | 47½d |
| Three-eighths blood | (56s) | 43d |
| Quarter-blood | (50s) | 34d |
| Cross-bred | (46s) | 27d |

Noils—Boston

| | |
|---|---|
| Fine | $.95- $.98 |
| Half-blood | .85- .90 |
| High ⅜ blood | .75- .80 |
| Aver. ⅜ blood | .65- .70 |
| Low ⅜ blood | .60- .63 |
| High ¼ blood | .60- .62 |
| 46s | .55- .55 |
| 44s | 50- .52 |

**Sunshine Winding, Warping & Sizing Co.,** Paterson, N. J., has taken out a state charter, with capital of $10,000, to take over and operate local mill of company of same name. Meyer W. Stein and Max Weberman, 540 East Twenty-seventh St., Paterson, are the principal incorporators.

## Yarn Advance Continues

### *Five Cent Advance in Outerwear Counts*

**Philadelphia.**

THE market has witnessed a further advance in quarter blood yarns this week, spinners of outerwear counts having raised asking-prices of 2-20s, 50s, from the former level, $1.45 to the new basis of $1.50, representing an advance of twenty-five cents since the first of the year in this count. It is reported there are only limited quantities of this grade available at any lower figure, practically every large spinner having named $1.50 as their quotation this week. While spinners of Bradford and French system weaving yarns have been advancing asking prices from week to week they state it has as yet been difficult to sell to mills in volume at the new price level and when important sales are completed these are usually at figures representing a compromise.

This situation reflects the present status of the market, consumers of quarter blood yarns, represented by manufacturers of all varieties of outerwear find that they are confronted with a stronger yarn market than manufacturers who are consumers of weaving counts. While the raw material situation has been a prime cause of this condition of the yarn market, this has not been altogether true as spinners of half blood and fine yarns have also been compelled to pay considerably higher prices for these grades of wool but find that they are unable to merchandise yarns on a price basis comparing with the higher wool price level, spinners of 2-50s Bradford, for example, selling this count at practically the same figures they obtained a number of months ago.

#### Large Knitting Orders

Spinners of outerwear yarns in this vicinity have not only advanced quotations from week to week, but they have been selling in volume at the advanced figures, it being reported that the largest volume of new business booked by this group during the year to date was sold during the last two weeks when the $1.45 basis for 2-20s was first made effective. There was a spurt in demand from outerwear manufacturers apparent during the last week of April and during the first week of the present month which continued until the price of this count was raised to the present level of $1.50. During this period of activity spinners sold fair to large sized quantities to sweater and bathing-suit manufacturers calling for shipments to be made during the next three months beyond which they have refused to sell.

Although spinners of weaving yarns have not been able to keep abreast of the advancing wool market to the same degree that spinners of outerwear counts have, it is apparent there is at present a more concerted attempt being made by all spinners to bring yarns up to a basis approaching the raw material costs at this time. This has not been true during the last few years when worsted yarn spinners have been attempting to sell yarns at prices having little relation to their wool or top costs, the main idea in their mind being to keep machinery engaged to the greatest degree possible and to keep their organizations intact. There are definite indications throughout the trade, more apparent as yet in the knitting yarn spinning group, that this is gradually being changed and from now on spinners are going to make a more strenuous attempt to bring the average selling-price up to a level more in line with the wool market than in the past.

#### Spinners' Policy Changed

In previous instances when wools advanced faster than manufacturers were able to raise goods-buyer's ideas and demand became small, spinners would reduce yarn prices in an attempt to sell in volume and thereby bring yarns down to a level representing less than cost. At present there is a tendency among them to curtail rather than to continue to sell at a loss and there are many in the yarn trade who see indications this trend will become more noticeable in the immediate future.

An instance of this was seen last month when demand from outerwear manufacturers declined drastically during the second week of the month. Instead of reducing prices spinners continued to quote their previous figures and the market was not broken notwithstanding lack of demand. Several spinners of knitting yarns have stated that in previous instances of this kind the price of 2-20s would have been reduced ten cents. Instead the $1.40 "going price" was kept in force and the following week an advance was made to $1.45 at which a large volume of business was booked during the last week of April and early May.

#### Improvement in Weaving Yarns

From a spinner's standpoint the improvement has been less noticeable in weaving yarns notwithstanding the fact representative weaving yarn concerns state there has been a steady expansion in inquiry and sales during recent weeks. It is more difficult under present buying conditions, where hand-to-mouth quantities purchased at a time are the rule, to state just when improvement in demand starts than in the past, when 100,000 lbs. purchases were not uncommon.

Under present conditions yarn concerns themselves are frequently misled and do not realize improvement in sales is taking place until their total sales for a week or for a month are added. While day to day trading during April was reported poor to barely fair, many houses report the total for that period represented the largest booked any month this year. During the last two weeks sales to weavers in this section have increased slightly rather than the reverse, a larger number of fair to medium sized sales being made this week.

### WORSTED YARN QUOTATIONS

(Corrected to Close of Business Wednesday)

**Bradford System**

| | |
|---|---|
| 2-12s, low com. (36s) | 1.10-1.15 |
| 2-16s, low com. (36-40s) | 1.15-1.20 |
| 2-20s to 2-24s, low ¼ (44s) | 1.30-1.35 |
| 2-20s to 2-26s, ¼ bld. (46-48s) | 1.37½-1.42½ |
| 2-26s to 2-30s, ¼ bld. (48s) | 1.50-1.55 |
| 2-30s to 2-32s, ¼ bld. S. A. (46s) | 1.50-1.55 |
| 2-32s, ¼ bld. (48-50s) | 1.57½-1.60 |
| 2-20s, ⅜ bld. (56s) | 1.65-1.67½ |
| 2-26s, ⅜ bld. (56s) | 1.70-1.72½ |
| 2-36s, ⅜ bld. (56s) | 1.75-1.77½ |
| 2-32s, ½ bld. (60s) | 1.75-1.77½ |
| 2-36s, ½ bld. (60s) | 1.80-1.82½ |
| 2-40s, ½ bld. (60s) | 1.85-1.87½ |
| 2-50s, high, ½ bld. (64s) | 2.00-2.05 |
| 2-50s, fine, (66-70s) | 2.07-2.12 |
| 2-60s, fine, (70s) | 2.60-2.70 |

**French System**

| | |
|---|---|
| 20s, high, ¼ bld. (50s) | 1.52½ |
| 20s, ⅜ bld. (56s) | 1.57½-1.62½ |
| 26s, ⅜ blood (56s) | 1.62½-1.67½ |
| 30s, ½ bld. (60s) | 1.77½-1.80 |
| 30s fine warp (66-70s) | 1.87½-1.92½ |
| 40s, ½ bld. (60-64s) | 1.95-1.97½ |
| 50s, (66-70s) | 2.12½-2.17½ |
| 60s, (70s) | 2.62-2.72 |

**Knitting Yarns in Oil (Bradford)**

| | |
|---|---|
| 2-20s, low, ¼ bld. (44s) | 1.25-1.30 |
| 2-18s to 2-20s, ¼ bld. (50s) | 1.47½-1.50 |
| 2-26s, ¼ bld. (50s) | 1.52½-1.55 |
| 2-30s, ¼ bld. (50s) | 1.57½-1.60 |
| 2-20s, ⅜ bld. (56s) | 1.65 |
| 2-20s, ½ bld. (60s) | 1.80-1.85 |

**French Spun Merino White**

| | |
|---|---|
| 30s, 50-50 | 1.35-1.37½ |
| 30s, 60-40 | 1.45-1.47½ |
| 30s, 70-30 | 1.55-1.57½ |
| 30s, 80-20 | 1.65-1.67½ |

## Situation Clearing Slowly

### Severe Struggle to Secure Replacement Yarn Prices

**BOSTON.**—The irregular situation in worsted yarns marketing is hanging on longer than anyone expected and in the opinion of some observers may continue for another year or longer before yarn

AMERICA WELCOMES

# Bemberg

*The Ace of Textiles*

IN an age of scientific wonders, when the human eye sees across the Atlantic, and man outflies the eagle, it is not strange that the genius of man should create something in the textile field that compares with other man-made textiles, just as the Spirit of St. Louis does with the first clumsy models of airplanes.

For Bemberg differs from every other textile both in its structure and in the process by which it is made. Fabrics of Bemberg, both knitted and woven, have a distinctive look, feel, drapability and soft crunching touch that the discriminating buyer will instantly recognize.

The fineness and strength of Bemberg fabrics are due to the gossamer-like fineness of each tiny filament which gives Bemberg yarns approximately the same number of filaments per denier as natural silk.

The evenness and elasticity of Bemberg are due to a special stretch-spinning process exclusive with Bemberg.

In addition to exceptional beauty and softness, Bemberg fabrics have special characteristics that make them extremely durable.

They absorb moisture readily.

They do not deteriorate with perspiration.

They can be washed in hot water.

They can be ironed with a *hot* iron.

They can be made sunfast and tubfast.

They do not run easily because of the elasticity of Bemberg yarns.

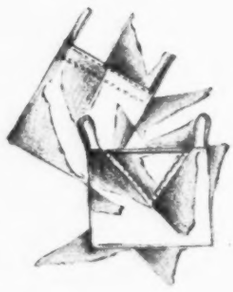
So American manufacturers welcome Bemberg, already successful in Europe, as the Ace of Textiles. Fabrics being made of it will set a new high standard of beauty, fineness and durability.

# Bemberg

AMERICAN BEMBERG CORPORATION
180 Madison Avenue, New York

REPRESENTATIVES:

A. B. GREENOUGH, 45 Milk St., Boston, Mass.
T. J. PORTER & SONS, 119 So. 4th St., Philadelphia, Pa.
A. L. HILL, 1st Nat'l Bank Bldg., Burlington, N. C.
GEORGE T. HUTCHINSON, 323 So. Franklin St., Chicago, Ill.
C. A. BYLES, James Building, Chattanooga, Tenn.



# Worsted Yarns—Continued

prices throughout the industry are based flatly by all spinners on the market cost of raw material. If spinners possess some lower priced wools or have top contracts made before the rise took place, and some of them are in this position, they are usually unable to reap full advantage of their foresight, the thin demand oftentimes making it necessary if production is to be kept up for them to sell yarns at prices which check effectively the general desire of the industry to stabilize itself nearer current wool costs.

Some knitters are covered months ahead on yarns well below replacement costs. That there will untimately be a rise in yarn prices unless, and this far from the impossible, in the course of the next 12 months raw materials should have a marked decline seems inevitable; and yet the industry is so overmachined that unless it is willing to wait until the growth of population takes up the machinery slack, or is willing to scrap its out of date machines, or both, there are yet unsatisfactory and hazardous days and months before the worsted spinning industry is considered as an independent branch of wool manufacturing.

In the Bradford district some spinners are complaining of lack of particulars on contracts. Manufacturers are apparently not in great need of yarns. The output of both tops and yarns has caught up with the demand. In piece goods the wholesaler is deferring purchases hoping that wool values will decline. New business is scarce. Yarn prices are easier, down 1 penny per pound all along the line. Goods distributors are resisting advances that are being made in cloth prices and owing to inadequacy of new business coming forward it looks as though there might be in the near future considerable curtailment in yarn output.

**BRADFORD (Eng.) YARNS**

| | s | d |
|---|---|---|
| 2-16s, 36s | 2 | 5 |
| 2-24s, 44s | 2 | 9½ |
| 2-36s, 58s | 5 | 0 |
| 2-48s, 64s | 5 | 11 |
| 2-60s, 70s | 7 | 3 |

## Big Wool Shipments from Price, Utah

PRICE, UTAH.—This city will be the shipping point for the largest volume of wool from any one railroad station ever sent out of Utah, according to railroad officials here.

More than 225,000 fleeces and in the neighborhood of 75 carloads of wool will be shipped out of this city between now and June 10, according to contracts now on file here in the offices of the Denver & Rio Grande Western Railroad.

## Oregon Worsted Co. to Buy Wool Direct

PORTLAND, ORE.—The interests of the late Isadore Koshland, wool dealer of Portland, Oregon, have been purchased by the Oregon Worsted Co. of Portland. The Koshland firm was known as Theo. Bernheim, and was located at 15th and Irving streets.

## Wool Stocks 14% Less

### Decline from Dec. 31 to Mar. 31 Is Partly Seasonal

WASHINGTON, D. C.—Stocks of wools in and afloat to the United States on March 31, 1928, including tops and noils, amounted to 261,749,294 lbs., grease equivalent, according to the quarterly joint wool stock report by the Bureau of the Census, Department of Commerce and the Bureau of Agricultural Economics, Department of Agriculture. This marks a decline of 14% in total stocks since Dec. 31, 1927, a loss of 37% in dealers' stocks and a gain of 4% in mills' stocks.

This report is based on returns from 526 manufacturers received by the Bureau of the Census. This is exclusive of 13 manufacturers operating 60 mills, who failed to report for this quarter. The Bureau of Agricultural Economics received reports from 285 dealers. Schedules were not received from 22 concerns.

The stocks, by condition, consisted of 150,308,253 lbs. of grease wool; 22,538,933 lbs. of scoured wool; 15,662,360 lbs. of pulled wool; 15,503,411 lbs. of tops; and 7,236,603 lbs. of noils.

Of the total amount of raw wool reported, 49.6% was domestic and 50.4% was foreign.

Of the raw wool reported 36.8% was 64s, 70s, 80s (fine); 11.3%, 58s, 60s (½-blood); 10%, 56s (⅜-blood); 9.2%, 48s, 50s (¼-blood); 10.3%, 36s, 40s, 44s, 46s, lower grades; 22.4%, carpet.

The holdings of dealers according to markets were as follows: Boston, 48,035,060; Philadelphia, 10,491,758; Chicago, 6,043,495; St. Louis, 2,819,240; Pacific Coast, 930,735; New York, 603,199; and other cities, 2,094,489.

A summary of the holdings on March 31, 1928 and Dec. 31, 1927 follows in thousands of pounds:

| Item | Held by dealers Mar. 31, 1928 | Held by dealers Dec. 31, 1927 | Held by manufacturers Mar. 31, 1928 | Held by manufacturers Dec. 31, 1927 |
|---|---|---|---|---|
| Total, incl. tops & noils | 71,017 | 118,615 | 140,231 | 135,323 |
| Raw wool | 66,656 | 112,912 | 121,852 | 117,126 |
| Grease | 50,988 | 97,787 | 99,319 | 98,577 |
| Scoured | 7,906 | 8,774 | 14,631 | 13,133 |
| Pulled | 7,760 | 6,350 | 7,901 | 5,416 |
| Tops | 2,056 | 3,207 | 13,447 | 13,654 |
| Noils | 2,305 | 2,495 | 4,931 | 4,542 |
| Total, grease equivalent [1] | 85,873 | 135,210 | 175,876 | 168,458 |

Aggregate stocks of raw wool held by dealers and manufacturers on March 31, 1928, by grades follow in thousands of pounds, the last 000s omitted:

| Class and Grade | Total | Held by dealers | Held by manufacturers |
|---|---|---|---|
| Total | 188,509 | 66,656 | 121,852 |
| Domestic | 93,574 | 39,661 | 53,913 |
| Foreign | 94,935 | 26,995 | 67,939 |
| Combing [2] | 101,507 | 35,650 | 65,856 |
| Clothing [2] | 41,918 | 19,232 | 22,686 |
| 64s, 70s, 80s (Fine) | 67,927 | 26,522 | 41,405 |
| 58s, 60s (½-Blood) | 20,896 | 8,162 | 12,733 |
| 56s (⅜-Blood) | 18,542 | 6,033 | 12,509 |
| 48s, 50s (¼-Blood) | 17,058 | 5,226 | 11,832 |
| 46s (Low ¼-Blood) | 9,280 | 3,490 | 5,889 |
| 44s (Common) [3] | 524 | 330 | 193 |
| 36s, 40s (Braid) [3] | 393 | 123 | 269 |
| 36s, 40s, 44s, Lincoln [4] | 8,701 | 4,992 | 3,708 |
| Carpet [4] | 41,425 | 8,115 | 33,309 |
| Grade not stated | 3,658 | 3,658 | ..... |

1. Combined stocks of grease, scoured, and pulled wools; see page 3 for figures on scoured and pulled wools. 2. Exclusive of "Carpet" and "Grade not stated." 3. All domestic. 4. All foreign.


Pocasset Worsted Company, Inc.

Worsted Yarns

Office and Mills — Thornton, R. I.

WORSTED YARNS — GRAY AND FANCY SHADES — BRADFORD — STEEL — SYSTEM — TWISTS AND MIXTURES — WEAVING-KNITTING

WARNER J. STEEL

Successor to EDWARD T. STEEL & CO.

Mills and Office — BRISTOL, PA.

WORSTED AND MERINO

FRENCH SPUN YARNS

FOR KNITTING AND WEAVING

Manufactured by

JULES DESURMONT WORSTED CO.

WOONSOCKET, R.I.

Philadelphia and Southern States—Thomas H. Ball, 1015 Chestnut St., Philadelphia, Pa.
New York—Charles Heyer, 1 Madison Ave.
Chicago—222 W. Adams St.
Boston and New England States—Messrs. H. W. Dwight and Walter Skerry, 10 High St., Boston.
Los Angeles, Calif.—Harvey J. Masteller.

Centredale Worsted Mills
Centerdale
R. I.

WORSTED YARNS

CRANSTON WORSTED MILLS, Bristol, R. I.

Mohair—Worsted and Novelty Yarns

Now—The Bristol, R. I., Plant of the COLLINS & AIKMAN CORP.

THE KENT MFG. CO.

Clifton Heights, Pa.

WORSTED YARNS

French Spun

*Rayon comes into its own!*

# Rayon's *future* in home and wardrobe assured

RAYON'S future is secure. Its growing popularity today rests on no fleeting fancy, no passing style. A hundred vogues—and particularly the age-old vogue of quality—have combined to establish rayon in the home and in the wardrobe. The new and finer rayon as developed by du Pont has made unique contributions to the textile field—new effects in color and line, unusual strength and durability, surprising softness and a lustre toned to every mode.

*Throughout the textile industry, knitters and weavers alike are realizing every day more keenly the possibilities of rayon, the new textile. Du Pont Super-Extra Rayon has certain definite contributions to make to your business*

What part is this finer rayon playing in your business today? What part will it play tomorrow? If you seek new ways and new profits through rayon remember that wherever there is a textile manufacturer of dominance almost invariably there is a user of du Pont Super-Extra Rayon.

# Du Pont *Super-Extra Rayon*

DU PONT RAYON
REG. U. S. PAT. OFFICE

| Du Pont Super-Extra Yarns are *truly* multi-filament | |
|---|---|
| *Denier* | *Filaments* |
| 65 | 26 |
| 80 | 30 |
| 100 | 40 |
| 125 | 50 |
| 150 | 60 |
| 170 | 60 |
| 200 | 80 |

DU PONT CHEMICAL CONTROL ASSURES DU PONT QUALITY

# RAYON AND SILK YARNS

## Better Rayon Demand For Standard Sizes

### Silk Trade Turning to 150s in Some Cases Due to Lower Cost—Underwear Call Better

More and more the silk trade is looming as a factor of real importance in the rayon market. Just now much of the development work that was heretofore concentrated on the cotton and a little later the knit underwear trades, is being transferred to silks. The time is fertile for rayon to take a real foothold in ideas of silk men. Competition which has been growing keener for years has now reached the point that no possibility of bringing down costs will be overlooked. Improvement in the yarns themselves together with the multifilament types now produced permit twisting in the manner of a silk yarn.

Principally the silk mills are looking for fine deniers. Anything over a 60 denier has been considered too coarse and the still lower counts such as 40 and 45 deniers were most desirable. Recently, however, a movement has been started looking to the use of the numbers from 100 up to 150 denier. The fine sizes due to production difficulties are rather high in price and with cost so vital a factor silk men would like to find something around $2.00 a pound or even under.

Increases in the use of rayon by the knit underwear trade have been reflected in the proportion of yarn sold so far this year. Two companies reporting give increase both actually and relatively which is possibly a reflection of the movement to extend this field to that of men's undergarments. Reports from the East indicate that men are lukewarm so far to the innovation, while the West has taken strongly to them.

## Rayon Waste Firm

### Prices Expected to Hold During Between-Season Lull

Business continues improved in rayon waste with the demand rather general, and embracing all types of waste instead of concentrating on any particular kind. The lower grades find a good call for mixing purposes and the better grades open bleached and tops also are wanted. The strong advance noted several weeks ago when the importance of the strong statistical position began to be better appreciated, has been well held. Prices remain firm and no weakness is looked for despite the near approach of the between season period when buying should be quieter.

| | |
|---|---|
| Open bleached | 19@22c |
| White thread | 14@16c |
| Bleached noils | 21@23c |
| Open unbleached | 16@19c |
| Colored thread | 9@11c |
| Unbleached noils | 19@21c |

## Enka Takes Option on Richmond Site

RICHMOND, Va.—Representatives of the Enka Artificial Silk Corp. of Holland have taken options on two 400-acre tracts of land on the north and south banks of the James River, just below this city, as a possible location for the proposed plant of the American Enka Corp. The options will run approximately ten weeks, it is understood.

It is stated that this step does not necessarily mean the location of the plant here, as the representatives have many sites in various parts of the country to consider before a final decision is reached.

## Branston to Build Plant Here

Martin Coles Harmon, of the Branston Artificial Silk Co., Ltd., of England, who as stated in these columns last week, is visiting this country, has confirmed the fact that his company plans to erect a large rayon manufacturing plant in the United States. Investigations of possible sites will be made before location and definite details are announced.

## Du Pont Rayon Co. Holds Sales Meeting

The Du Pont Rayon Co. held a general sales meeting in New York on Thursday and Friday of this week.

This meeting is an annual affair and those attending include sales department officials, district managers and all salesmen in the field.

T. R. Brown, director of sales, presided at the various business sessions.

## Group Insurance for Rayon Company's Workers

Employes of the Delaware Rayon Co., of New Castle, Del., have recently joined with their employers in acquiring group life insurance protection, through a policy issued by the Prudential Insurance Co. of America. The policy is for $245,500, covering the lives of 248 workers.

## Returns from European Trip

Tom Frusher, Jr., sales engineer with Joseph F. Hegeman, importer of textile and rayon machinery, returned on the SS. *Caronia* from an extensive business trip abroad, which took him into most of the leading European textile centers.

Besides having successfully settled pending negotiations, it is understood Mr. Frusher has also secured the agency for additional machinery for the textile and rayon industries.

## R. K. Laros Silk Co. Opens Charlotte Sales Office

CHARLOTTE, N. C.—The R. K. Laros Silk Co., operators of large silk throwing mills at Bethlehem, Pa., will soon open a branch sales office in this city, it was announced last week.

Officials of the company were here for several days last week making arrangements for opening the office, which will be under the management of A. B. Strickler. Silk for hosiery manufacturers will be the chief product for sale here, it is said.

## Push Silk Raising in Russia

According to reports received in Washington, D. C., from Russia, 200,000 mulberry trees will be planted this spring on the Community farm of Suchani.

In several districts of the Far Eastern sections of Russia, silk culture is being developed. Specialists state that the quality of the pri-maritime district silk is as good as Caucasian. This year 13,640 pounds of dry cocoons have been collected.

## DOMESTIC RAYON PRICES

| Denier | "A" | "B" | "C" |
|---|---|---|---|
| 35 | $3.50 | $3.25 | .... |
| 50 | 2.75 | 2.50 | .... |
| 75 | 2.50–2.55 | 2.30–2.35 | $2.20 |
| 80* | 2.60 | .... | .... |
| 90 | 2.30 | 2.15 | 2.05 |
| 100 | 2.15 | 2.00 | 1.90 |
| 100* | 2.25 | .... | .... |
| 120 | 1.80 | 1.70 | 1.60 |
| 125 | 1.75 | 1.65 | .... |
| 130 | 1.70 | 1.60 | 1.50 |
| 140 | 1.60 | 1.50 | 1.40 |
| 150 | 1.50 | 1.45 | 1.35 |
| 150* | 1.75 | .... | .... |
| 170 | 1.45 | 1.40 | 1.25 |
| 170* | 1.70 | .... | .... |
| 200 | 1.45 | 1.40 | 1.25 |
| 200* | 1.70 | .... | .... |
| 250 | 1.35 | 1.30 | 1.25 |
| 300 | 1.30 | 1.28 | 1.25 |
| 450 | 1.20–1.25 | 1.20 | 1.20 |
| 600 | 1.15–1.25 | 1.20 | 1.15 |
| 750 | 1.15 | .... | .... |
| 900 | 1.15–1.20 | .... | .... |

* Multi-filament.

**CELANESE**

| Denier | | Denier | |
|---|---|---|---|
| 45 | $4.00 | 170 | $2.85 |
| 75 | 3.25 | 200 | 2.75 |
| 100 | 3.15 | 300 | 2.70 |
| 150 | 2.90 | | |

**BEMBERG (Cuprammonium)†**

| Denier | Filaments | Price |
|---|---|---|
| 40 | 30 | 4.50 |
| 60 | 45 | 3.75 |
| 80 | 60 | 3.50 |
| 100 | 75 | 3.25 |
| 120 | 90 | 2.90 |
| 150 | 112 | 2.40 |
| 180 | 135 | 2.30 |
| 240 | 180 | 2.25 |
| 300 | 225 | 2.25 |

† All A grade; 2½ turns; unprepared in skein.

## Rayon Notes From Europe

*(Special to* TEXTILE WORLD*)*

### BELGIUM

A company known as the Soc. Financiere Internationale de Soie Artificielle has been formed with a capital of 219,000,000 francs to look after the Loewenstein artificial silk interests and the development of subsidiaries.

* * *

It is reported that the new Belgian-Canadian Finance Co., which has been formed by the Loewenstein interests will engage in the production of rayon in Canada.

* * *

The net profits of the Soie Artificielle d'Obourg in 1927 amounted to over 6,000,000 francs. The company is amalgamating with the Soc. Textile Belge. The output of nitrocellulose rayon is now almost 1,500,000 lbs. per annum, and that of viscose approximately three million lbs.

### HOLLAND

Exports of rayon yarn from Holland during March totalled 1,309,000 lbs. against 1,280,400 lbs. in February and 1,515,800 lbs. in March, 1927. The average value of the exports has substantially increased. Exports to Germany are much the same this year as in 1927 while the U.S. shows decrease.

* * *

The dividend of the Dutch Breda Co. for the year 1927 is to be at the rate of 8% against 6% in 1926. It is understood that the new Loewenstein interests opposed this increase, but that they were unable to carry the meeting, the proxies being disallowed.

* * *

It is understood that the Dutch Enka Co. is already producing acetate silk and that a further plant will be built at Nymegen for this purpose.

* * *

Strong efforts are being made, according to Berlin and Amsterdam reports, on the part of the International Holdings Co. to gain control of the Dutch Ekna Co. It is said that jointly with Glanzstoff, the International Holdings Co., now control 43% of the share capital.

### GERMANY

Exports of rayon yarn from Germany during 1927 amounted to 9,460,000 lbs. against 8,065,000 lbs. in 1926 and 8,353,000 lbs. in 1925. Imports in 1927 totalled 20,900,000 lbs. against 9,992,000 lbs. in 1926 and 4,488,000 lbs. in 1925.

### ITALY

Exports of rayon yarn from Italy in the month of January totalled 1,721,090 lbs. against 1,891,916 lbs. in the corresponding month of 1927. Germany still remains the most im-

Dyed & Natural — Raw & Thrown

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*Malina Company*

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*Hosiery Tram and Combination Yarns*

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TECHO A — for boiling off silk, or degumming it. You need add no other chemicals, for this jelly compound does the work more efficiently, gives a better lustre, brings out your colors more evenly. Absolutely neutral . . . cannot destroy your fabric. Thoroughly removes oils and grease.

**ATECHO**

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*Reading, Pa.*

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**NOTTINGHAM CURD TALLOW CHIP SOAP**

**POTASH FIG SOAPS**
for Woolens and Worsteds made with
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**RAYON** TOPS·NOILS PICARDED

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CANADIAN REPRESENTATIVES: WM. B. STEWART & SONS, LTD., TORONTO-MONTREAL

# Rayon and Silk Yarns—Continued

portant market but there has been a marked increase in exports to Britain. The trade with the United States is on a reduced scale.

## Thrown Silk Lower

### Severe Underselling as Dealers Strive to Maintain Volume

The thrown silk market was slightly lower last week in sympathy with the weaker tone to raw silk. This trend was much accentuated by the desire of dealers to sell silk in the face of a declining demand on the part of their customers. Many have reduced their schedules which would call for a similar reduction on the part of dealers, if prices for yarns were to be maintained. Dealers, however, have done everything in their power to maintain their volume which would call for drastic underselling on their part and a generally unsatisfactory market all around.

Several houses were aided by low cost purchases of raw but even these reported that prices were too low to permit anything like a normal profit. The low grade crepes were bought freely under $6.00 a pound. High grade 3 thd georgette which should bring $6.65 was sold at $6.25. Radium yarns which need the highest grade raw stock sold cheaply also. Further buying of tram by the hoisery mills helped the market and some interest was shown here in new season silk.

(60 days basis)

| | |
|---|---|
| Japan Organzine, 2 thd. Grand XX in skeins. | $6 70 |
| Japan Tram, 3 & 4 thd. in skeins | 5 85 |
| Japan Tram, 5 thd. on cones | 5 80 |
| Japan Crepe, 2 thd. Grand XX on bobbins | 6 95 |
| Japan Crepe, 3 thd. So. Crack on bobbins | 6 55 |
| Japan Crepe, 4 thd. Crack on bobbins | 6 25 |
| Canton Filature, 3 thd. N S. 14/16 on bobbins | 5 35 |
| Tussah Filature, 2 end on cops | 2 75 |

## Spun Silk Steady

### Market Improves as Mills Prepare for Fall Season

Some further improvement was reported by spinners last week. More manufacturers were taking sample lots for use in their fall lines and this combined with some rather heavy buying from several large operators served to give the market an appearance of activity. Producers are encouraged by the large number of firms that are sampling as this always means business from a certain proportion of them.

Singles were wanted for the most part and prices on the 1st quality yarns ranged around $3.40 which shows no change. The necessity of bringing out a cloth at a price formed continued substitution of lower grade yarn but a fair proportion of buyers insisted upon the top grades.

(2%—30 days)

| | | | |
|---|---|---|---|
| 60-2 | $4 40 | 40-2 | $4 10 |
| 50-2 | 4 25 | 60-1 | 3 40 |

## Raw Silk Rallies

### Low Grade 13/15 Silk Sold in Quantity at Low Prices

Japan prices showed a substantial rally from the low point at which they began the week. Some substantial sales were reported to begin the week, being inspired by the belief that the exchange rate which was falling rapidly on the news from the Orient, would move still lower. All the sales reported other than 20/22s which can still be bought in moderate quantity in the higher grades, were in x 13/15. Prices down to $4.75 were heard which could be taken as an indication of either one of two things in view of the subsequent recover in the market. Either that the seller lost money on the sales or that parcels bought abroad were sub-standard in quality and could be obtained at a considerable discount from Saiyu.

In contrast to last season, few offers of new season silk have been made by importers. One heard was for Crack 20/22 for July shipment L/C at slightly under $5.00. Hosiery mills are understood to be negotiating for deliveries up to the end of the year with little concluded along these lines as yet. Canton 14/16 was offered around $4.15 for shipment L/C but spot quantities continued to rule at $4.30.

(90 days basis)

| | | |
|---|---|---|
| Japan Filature, Grand XX | 13/15 | $5 70 |
| Japan Filature, Sp. Crack | 13/15 | 5 45 |
| Japan Filature, Crack XX | 13/15 | 5 30 |
| Japan Filature, XX | 13/15 | 5 15 |
| Japan Filature, Best X | 13/15 | 5 10 |
| Japan Filature, X | 13/15 | 5 07½ |
| (20/22s quoted at a discount of 30c a pound) | | |
| Canton Filature, New Style | 14/16 | 4 30 |
| Canton Filature, New Style | 20/22 | 3 95 |
| Tussah Filature, 8 cocoon | | 2 25 |

### SUMMARY OF SILK CABLES

| | |
|---|---|
| Saiyu-Yokohama | 1,350 Yen |
| Exchange at 3 m/s | 47½ |
| Cost C. I. F. New York | $5.09 |

The Yokohama market rallied a little early last week but prices subsequently moved off again to the lowest point of the current decline. Considering the lower exchange rate now in force, cost prices for raw silk are lower than in several months but up till the present buying abroad has been for the most part covering against sales made in New York. On May 10 and 11, transactions showed an increase to 1,700 bales each day due to the low point reached in exchange at 47.00. A rally in exchange of ⅝ of a point checked this buying, however, and sales averaged around 500 bales a day over the remainder of the period. Developments for several weeks are not likely to be of particular interest as stocks in Japan are reported to be almost entirely low grades. In 13/15 it is understood that no high-grade silk in any quantity is available. Canton was steady last week with fair buying for America serving to prevent a further decline.

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THOROUGHNESS in the "Atlas Special Process" is the real foundation of the "Atlas" results.

Each step of the "Atlas Special Process" in the dyeing of yarns is thoroughly supervised and carefully watched.

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OUR SPECIALTY: We grade new woolen clippings ready for the picker. Write for samples and prices. Correspondence solicited.

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# WOOL AND SUBSTITUTES

## Improved Prospect for Substitutes

### Heavyweight Operations Still Lagging but Well Graded Rags in Better Call

**BOSTON.**—Demand for reworked materials seems to be improving a little. Steady woolen mill activity in some sections of New England is given as the cause. The woolen branch of manufacturing as a general thing runs more on a level plane escaping the hills and valleys characteristic of worsted manufacturing. As long as the price of the finished goods is so important a factor and as long as virgin wool continues out of a line with silk, cotton and commodities in general just so long will there be a good business prospect for woolens and substitutes used by these mills to cheapen the high cost of their raw material.

There is some difference of opinion as to the real status of the industry at this time and much more difference regarding the actual condition from the rag selling standpoint. Some sellers are moderately optimistic while others are decidedly pessimistic. It is a very difficult situation to size up accurately but it seems fair to state that business on the whole is not very brisk and that most rags are in the buyer's favor. Light hoods are selling around 21c which gives a carbonized basis of around 30c. The fully processed material is quoted 38-39c. Carded carbonized white knits are around 63c, white softs, 58c, black worsted 23-24c; black serge 23c and blue serge 21c.

The use of white wool wastes by manufacturers to cheapen the first cost of their raw materials continues restricted owing to the high level of prices asked on the several classifications. White wastes have advanced more than wools for year to date and wool is plenty high enough from the mill standpoint. Dealers, however, are not alone responsible for high values. They don't produce waste but buy it in the first instance and the sellers who are producing mills base their notions upon what a waste is worth on the price they have paid for the wool.

Colored woolen wastes moving as they do on a low price level seem more active but even in this class of material mills are bidding 3-5c per pound under dealers' asking prices. The market seems short on good white wastes. Dealers are willing to pay strong prices for good lap waste. Two parcels of fine soft waste drawing, roving and spinning, are offered at $1.20 and $1.25 respectively. Fine white drawing lap is firm at $1.30. In fine threads the mill limit seems to be around 92c with dealers asking 95c or better.

## Wool Stocks at New Low Point

### *Slump in Dealer and Pool Holdings—Acute Decline in Medium Wools, 56s and 48-50s*

**Boston.**

STOCKS of wool in the United States as of March 31 were at the lowest point since September 1922 when the Government tabulation commenced. At that time United States wool stocks totalled 525,174,000 grease pounds while March 31 of this year the full amount was 261,749,000 pounds representing a decline for the period of 50%.

The full total of stocks as of March 31 covers not merely wools in the grease but scoured and pulled wools, also tops and noils all advanced to a grease poundage. The total amount of straight grease wool in the country March 31 was 150,308,000 pounds of which amount 65,657,000 pounds was domestic and 84,651,000 pounds foreign. From the foreign total must be deducted 36,997,000 pounds of carpet wool which leaves a stock of foreign wool for clothing purposes on the date named at the low point of 47,650,000 pounds although slightly above the 45,798,000 pounds held December 31, 1927.

In stocks held by dealers and pools a pronounced slump occurred in the January-March quarter this year, from 135,210,000 pounds December 31 to 85,873,000 pounds March 31, a decline of 36.5%. Manufacturers' stocks gained 4.4% during the quarter. Mill wool holdings since March 1925 have been comparatively steady, the fluctuations from quarter to quarter having an extreme range of 19 million pounds only.

Not for years have stocks of spot wool in Boston been in so small a compass, and it can be readily understood that this scarcity of raw material has operated as a strong factor in maintaining values. During the last six weeks the arrival of domestic wool shorn since March 31 has been very small and imports also have been in very restricted volume. The following table shows U. S. March stocks grease basis for the periods named:

| | Mfrs. | Dealers & Pools |
|---|---|---|
| March 1923 ... | 288,200,000 | 213,141,000 |
| March 1924 ... | 213,129,000 | 158,029,000 |
| March 1925 ... | 179,243,000 | 126,157,000 |
| March 1926 ... | 176,520,000 | 154,803,000 |
| March 1927 ... | 161,708,000 | 129,948,000 |
| March 1928 ... | 175,876,000 | 85,873,000 |

It may further be said that stocks of medium wool are not only small in amount of wool actually held but constitute also a decreasing percentage of total stocks. Total U. S. stocks have been declining steadily for the last eight years but medium wool stocks have shrunk even more rapidly. The explanation may probably be found, in large part at least, in the peculiar character of the existing tariff which went into effect September 22, 1922, and operates to exact a much larger grease duty on medium and low than on fine wools. The decline in imports of these grades has led to a more insistent demand for similar domestic wools and a shortage of these types seems plainly in sight. The table herewith indicates the general trend:

**Manufacturers Grease Stocks**

| | Total Stocks | Medium Wools | Per cent of Total |
|---|---|---|---|
| Dec. 1923.. | 121,173,000 | 37,970,000 | 31 |
| Dec. 1925.. | 97,162,000 | 24,217,000 | 25 |
| Dec. 1927.. | 98,577,000 | 18,595,000 | 18 |
| March 1928 | 99,319,000 | 14,512,000 | 15 |

**Dealer & Pool Grease Stocks**

| | Total Stocks | Medium Wools | Per cent of Total |
|---|---|---|---|
| Dec. 1923.. | 144,014,000 | 37,700,000 | 26 |
| Dec. 1925.. | 117,726,000 | 28,922,000 | 25 |
| Dec. 1927.. | 97,787,000 | 10,946,000 | 11 |
| March 1928 | 50,988,000 | 5,546,000 | 10.9 |

## Wool and Substitute Quotations

**(Corrected at close of business on Wednesday)**

### WOOL

**Ohio, Pennsylvania and West Virginia**

| | |
|---|---|
| Fine delaine | .49—.50 |
| Fine clothing | .38—.39 |
| ½ blood | .50—.51 |
| ⅝ blood | .53½—.54 |
| ¼ blood | .53½—.54 |

**California (Scoured Basis)**

| | |
|---|---|
| Northern, 12 mo. | 1.15—1.18 |
| Southern, 12 mo. | .97—1.00 |

**Texas (Scoured Basis)**

| | |
|---|---|
| Fine 12 mo. | 1.18—1.20 |
| Fine 8 mo. | 1.10—1.12 |

**Pulled—Eastern (Scoured Basis)**

| | |
|---|---|
| A.A. | 1.15—1.20 |
| A-Super | 1.08—1.10 |
| B-Super | .95—1.00 |
| C-Super | .83— .87 |

**Montana, Idaho and Wyoming (Scoured Basis)**

| | |
|---|---|
| Staple fine | 1.17—1.20 |
| Do. ½ bld. | 1.12—1.15 |
| Fine & fine medium | 1.10—1.12 |
| ⅜ blood | 1.05—1.08 |
| ¼ blood | .98—1.00 |

**Mohair—Domestic**

| | |
|---|---|
| Best combing | .75—.78 |
| Best Carding | .50—.55 |

**Mohair—Foreign (In Bond)**

| | |
|---|---|
| Turkey Fair average | .42—.52 |
| Cape Firsts | .48—.50 |

**Foreign Clothing and Combing (In Bond)**

Scoured Basis—

| | |
|---|---|
| Canadian: | |
| Alberta F & F medium | 1.10—1.12 |
| Cape: | |
| Super 12 months | 1.08—1.10 |
| Super 10-12 months | 1.02—1.05 |
| Australian: | |
| 70s | 1.15—1.18 |
| 64s | 1.02—1.05 |
| 58—60s | 90— .92 |

Grease Basis—

| | |
|---|---|
| Montevideo: | |
| 58-60s | .54—.55 |
| 56s | .52—.53 |
| 50s | .50—.51 |
| Buenos Aires: | |
| 48, 40—44s | .37—.38 |
| 58, 36—40s | .35—.36 |

**Foreign Carpet (Grease Basis in Bond)**

| | |
|---|---|
| China: Combing No. 1 | .25—.26 |
| China Filling Fleece | .23—.24 |
| Szechuen ass't | .23—.24 |
| Cordova | .24—.25 |
| Scotch Black Face | .25—.26 |
| East India: Kandahar | .37—.39 |
| Vican'r | .40—.44 |
| Joria | .43—.48 |
| Aleppo | .36—.37 |

### SUBSTITUTES

**Wool Waste**

| | |
|---|---|
| Lap— | |
| Fine white | 1.27—1.30 |
| Fine Colored | .92— .95 |
| Thread White Worsted— | |
| Fine | .93— .95 |
| ½ blood | .83— .87 |
| ⅜ blood | .73— .75 |
| ¼ blood | .63— .65 |
| Thread Colored Worsted— | |
| Fine Two-ply | .36— .38 |
| ½ blood, Two-ply | .32— .35 |
| ⅜ blood, Two-ply | .28— .30 |
| ¼ blood, Two-ply | .25— .28 |
| Card— | |
| Fine white | .53— .57 |
| Medium white | .35— .37 |

**Old Woolen Rags** (Graded for Mfrs.)

| | |
|---|---|
| Merinos— | |
| Coarse light | 7 — 8 |
| Fine dark | 8 — 8½ |
| Fine light | 15 —16 |
| Serges— | |
| Blue | 8 — 9 |
| Black | 8 — 9 |
| Red | 15 —16 |
| Knit— | |
| White | 44 —45 |
| Red | 15 —16 |
| Light hoods | 20 —21 |
| Worsteds— | |
| Light | 7½— 8 |
| Blue | 8 — 9 |
| Black | 8 — 8½ |

## Sluggish Wool Market

### Awaiting Further Receipts—Texas Growers Get Their Price

**BOSTON.**—Prices are steady on Summer Street with moderate activity covering a number of sorts though at this time in small volume. Wool supplies outside the United States are at this time at their maximum. In the United States the clip is coming along in larger volume weekly but it will all apparently be needed, particularly the medium wools which in spite of a continual advance in price are yet much cheaper than similar foreign wools, even if such wool were available, when the high duty is added to the import. The full influence of the Fordney-Macomber Tariff has not yet been realized but it is already very evident that the exacting of a higher grease duty on medium wools than on fine has very effectively prevented anything like a normal import of these qualities into the United States.

Apart from further purchasing of Texas wools at prices asked by the growers there is little new in the market. The principal buyers of Summer Street recently have been several of the large topmakers who have been in receipt of good-sized orders. Some mills accustomed to making their own tops have it is said recently been disinclined to speculate on the wool situation by making purchases of the raw material themselves and have adopted the policy of placing orders for these semi-manufactures with the larger top houses.

In the Ohio wools there is an upward tendency in the ⅜ blood and ¼ blood which are both quoted at 54c in the grease while the delaine wool is quoted 49-50c. In territory wools the

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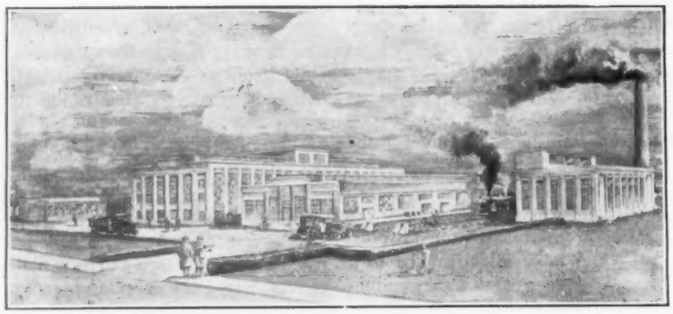
# Becco Electrolytic Hydrogen Peroxide

The boil-off is eliminated

The goods are bleached in from 6 to 12 hours

The strength of the thread yarns is in no way impaired

Loss in weight is reduced to a minimum averaging from 1 to 3 per cent against the weight of the unbleached goods



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**BUFFALO ELECTRO-CHEMICAL CO., Inc.**

**Station B, Buffalo, N. Y.**

## *NOVELTIES AND SPECIALTIES*

Cities, towns, and villages in Georgia, Alabama, and the Chattanooga District—the territory served by Central of Georgia lines—will welcome competent and capable textile manufacturers who knit or weave specialties or novelties from any kind of yarn. Write us about your product and equipment. You will hear from us promptly and frankly as to what this territory offers you.

Because it isn't being made today, doesn't mean that it can't be made tomorrow—not in this territory with its record of diversifying its textile manufacturing.

Write us and learn what this territory has for you.

J. M. MALLORY, *General Industrial Agent*

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OBLONG BASKET

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For All Mill Operation

A Style for Every Use

W. T. LANE & BROTHERS

Manufacturers

POUGHKEEPSIE, N. Y.

## Wool—Continued

¼ blood grade is held very firmly at $1.12-$1.15 with the 56s at $1.07-$1.10 and the 48s-50s at 98c-$1.00. The limited quantities of Australian and South American wools in bond are unchanged for the week. Australian 64s are quoted $1.02-$1.05; New Zealand 58s, 95c-$1.00; Montevideo 50s, 50-51c in the grease; B A 4s at 38-39c.

In carpet wools the situation is very generally sluggish. Mills are not buying ahead even though prices on China wools are rather easier. White Kandahar is quoted at 36-38c in bond with the Aleppo wools at 35-38c.

### Boston Wool Receipts

Receipts of domestic and foreign wools at Boston also imports at Philadelphia and New York for the week ended May 12, based upon data compiled by the Market News Service of Bureau of Agriculture Economics, Department of Agriculture, are as follows:

| | Week Ended May 12 | 1928 | 1927 |
|---|---|---|---|
| Domestic ..... | 5,947,000 | 37,482,000 | 34,200,000 |
| Foreign ..... | 2,265,000 | 55,303,000 | 73,230,000 |
| Total ..... | 8,212,000 | 92,785,000 | 107,430,000 |
| IMPORTS AT PRINCIPAL PORTS | | | |
| Boston ..... | 2,265,000 | 55,303,000 | 73,230,000 |
| Philadelphia .. | 1,761,000 | 22,846,000 | 31,658,000 |
| New York..... | 1,594,000 | 24,583,000 | 26,626,000 |
| Total ..... | 5,620,000 | 102,732,000 | 131,514,000 |

### Finer Grades More Active

#### Prices in Middle West Strong and Trending Upward

**PHILADELPHIA.**— Firmness of prices is the outstanding characteristic of the market, higher prices having been paid during the last week for Texas, Montana and other wools as compared with previous sales. New territory wools are arriving in the local market but not in large volume, important shipments being expected the last of this month. Lots that have been sold bring top prices and dealers state they find little difficulty in finding buyers for early arriving territory wools. New fleece wools have not been received by dealers in quantity and interest is centered in the Middle west, prices being practically nominal so far as this market is concerned, in the absence of spot wools.

#### New Fleece Prices

In the fleece sections dealers state their buyers have found grower's ideas to have advanced during the last week and lower offers do not result in sales, country-owners being content to hold for asking-prices. Although several dealers assert that new, bright, medium wools will be worth at least 55c landed in Philadelphia, on the basis of recent purchases in the country, other dealers believe the general market has not advanced to this extent, expressing the opinion that $1.00 clean for the new medium fleece wools is too high and 95c to 97c is more in line with actual selling conditions to the spinner and manufacturer.

A purchase of quarter and three eighths Missouri has been reported by a local dealer at a country point at a price he states means that at least 55c will be their cost landed in this city. On this basis the dealer will have to obtain more than 56c from the spinner to make this purchase profitable. Other dealers believe this purchase is out of line with the market and a landed cost of 51c to 52c in Philadelphia would be more in line with recent selling prices. In Wisconsin 53c has been quoted dealers endeavoring to buy in those sections, this figure being the cost of quarter and three eighths landed in Philadelphia. In Tennessee growers have been quoting 53c for clear, medium bright wools and a sale to dealer was reported within the last three days at this price while burry and seedy out of the same wool brought 47c to 47½c. The latter prices are for wool landed in dealer's warehouse.

#### Better Demand for Fine

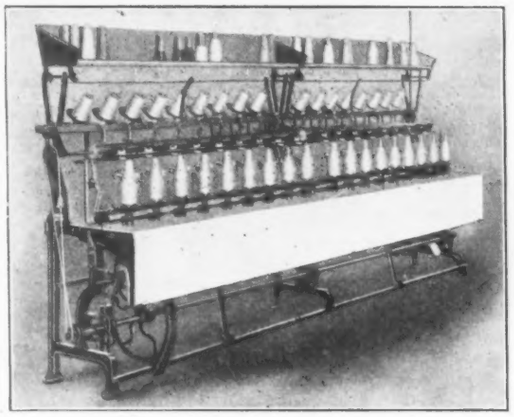
Quarter blood territory staple is being quoted at $1.00, three-eighths at $1.05 to $1.07, half blood staple at $1.15 and average fine at $1.10. There is little fine wool in this market, this grade being the slowest to arrive and nominal quotations average $1.18. From this it may be seen dealers are quoting, and state they are able to sell, half blood at practically the same price they receive for fine. Finer wools have been the most difficult to move and prices have not been advancing with half blood and lower wools; but a trend in the opposite direction has been reported this week, a number of dealers in both grease and scoured wools stating they have received more inquiries for fine than heretofore.

#### Pulled and Scoured Quiet

Pulled and scoured wools are less active, prices remaining firm at last week's level. Dealers have found a better request for half blood and fine in scoured and in corresponding grades of pulled wools this week. Noils are more active than for several weeks and prices are slightly higher in all grades with the exception of quarter and three eights which are quiet at present. This is in contrast to previous conditions in noils, demand being formerly confined to medium grades which were the strongest. Choice half blood noils have sold this week at 92c; three-eighths is quoted at 75c to 80c and quarter blood at 65c. Carpet wools are firm and demand spotty, no new trend being evident this week.

### Basch & Greenfield in New Location

The Basch & Greenfield Corp. is to establish itself in new quarters near Newark, N. J., and will continue as heretofore in the business of manufacturing re-worked wools. The Basch & Greenfield Co., its predecessor, is selling by auction a quantity of stock and machinery, but this does not affect the operation of the Basch & Greenfield Corp. The auction takes place at 59-67 Seventh Ave., Newark, N. J., on Monday, May 28, beginning at 9:30 a. m., Daylight Saving Time, by order of the executors of the estate of Charles J. Basch.

# Winds Better Bobbins!

LEVER NO. 30 Backwinders **do** wind better bobbins! There are many reasons for this. For instance, the LEVER Patented Yarn Cleaners with which these machines are equipped. These cleaners remove knots, slubs and other imperfections that tend to interfere with the rapid, free delivery of yarn from the bobbins while feeding the knitting machines. They also do this without scraping or roughing the yarn in any manner, thereby delivering smooth, even yarn to the bobbins.

The roller emulsion trough also contributes its share toward better bobbins by uniformly applying an emulsion treatment that smooths down the filaments, giving the bobbin a "slick" appearance and assuring smoother action through the needles. Finally the unique cup builders, with uncanny precision, build firm, symmetrical bobbins, without underwinds, that give a free delivery of yarn at even tension — an important requirement in rayon work.

LEVER NO. 30 Backwinders are giving satisfaction to mill owners everywhere — they will do the same for you.

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*See Also* CONSOLIDATED TEXTILE CATALOG

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American Bank Bldg.,
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*Southern Agent.*

## *A NEW BLUE BLACK FOR WOOL*

NATIONAL Alizarine Blue Black BG is an entirely new dye for wool. Valuable for the production of full shades, and also for slates and grays of good fastness to light and fulling. Practically unaffected by monel metal and copper, and can be dyed in iron, although the shade turns somewhat yellower and duller.

Adapted for the dyeing of raw stock, yarn, slubbing, and piece-goods; and suitable for application by all three chrome methods. Also suitable for vigoureux printing.

**National Aniline & Chemical Co., Inc.**
**40 Rector Street, New York, N. Y.**

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# NATIONAL DYES

NATIONAL N DYES

# DYESTUFFS AND CHEMICALS

## New Leucosol Blue for Printing

The Dyestuffs Department of E. I. du Pont de Nemours & Co. is placing on the market an addition to their new line of Leucosol dyestuffs, recently announced. This product is offered particularly for printing heavy shades and is described as follows:

"Leucosol Blue G Paste possesses all the good qualities of the Leucosol colors, being non-foaming, grit-free and extremely homogeneous, so that it does not settle out. It does not form crusts in the barrels, as it is non-drying and consequently the printing pastes do not vary in strength and there is no formation of hard particles of dyestuffs to scratch the rolls.

"Leucosol Blue G Paste possesses the excellent fastness, especially to light and washing, of the anthraquinone vat blues."

## S. W. Jacobs Advanced by Electro Bleaching Gas Co.

At a recent meeting of the board of directors of Electro Bleaching Gas Co., S. W. Jacobs was elected vice-president.

Mr. Jacobs will continue to make his headquarters at the main sales office of Electro Bleaching Gas Co., 9 East 41 Street, New York, N. Y.

# Dyeing Fast Vat Colors

### *Add Sulphuric Acid to the Wash to Neutralize Caustic Soda*

*By C. E. Brookes**

THE subject assigned to me is not that of dyeing vat colors, but something rather more—that is, the dyeing of *fast* vat colors. Let us assume that we are speaking of and meaning fast to bleaching.

Dyestuff manufacturers introduced vat colors to the textile trade several years ago, and let us presume that they had one main thought in mind and that was to produce dyestuffs that would stand chlorine, whether it be chlorine in the laundry or chlorine in the bleachery, in addition to boiling soaps, sodas, sours, etc.

### Three Groups of Vat Colors

In order to dye fast vat colors let us see first what we have to work with. There are three groups of vat colors, sold under many different trade names. In reality they are the anthraquinone group, the indigoid group, and the carbazol group. These groups vary somewhat, and we also find in both practice and theory that different colors in each group and also some in the same group vary in their properties—I mean vary from a standpoint of dyeing temperature, exhaustion, level dyeing, and also fastness.

It therefore seems to me that in order to dye colors that will stand bleaching and to be sure that fast vat colors are being dyed, it is absolutely imperative that the dyer be very careful in his selection of the vat colors to be so employed, always taking into consideration the fabric to be subsequently produced. He must decide whether the piece goods, such as chambrays, have merely to stand the laundry tests or whether the yarns being dyed have to go into piece goods such as towels, shirtings, handkerchiefs, etc., which have to stand piece bleaching.

I am somewhat afraid we have been a little too careless. Too many dryers are prone to think they are dyeing vat colors and that vat colors are *fast*. Vat colors are only *fast* when they are dyed *fast;* and I can prove this by the following facts—facts I know you are familiar with. We all know cases in which the selfsame vat color dyed in one plant stands bleaching with no marking off or bleeding, yet that same color dyed in another plant will not stand the same bleacher's process.

### The Accepted Process

Since in all practice there is the human element involved, processes, like products, will vary somewhat; but even though both the dyer and the bleacher may vary their process from that employed by their neighbors, I do contend that certain basic principles must be adhered to.

All dyers know the general and accepted process or formula for the dyeing of vat colors. I want to bring out the one little thought or point that might make it more easily possible to do the actual dyeing and to adhere to the regular accepted method at the same time.

We are all agreed that vat colors are dyed approximately as follows, according to formula:

First, *wet out* or *boil out* the raw cotton, yarns, warps, tubes, or skeins to insure proper penetration, and set the bath at the dyeing temperature with the addition of a little hydrosulphite and caustic soda.

Second, reduce the dyestuff with the necessary chemicals that the formula calls for and add it to the machine.

Third, dye the usual length of time.

Fourth, wash thoroughly to eliminate any excess color and chemicals from the fibers.

Fifth, oxidize by developing or

* Sales manager, Boremco Associates, Charlotte, N. C. Paper read at Spring meeting of Dyers, Bleachers, Finishers,, and Mercerizers Division of Southern Textile Association.

### Miscellaneous Chemicals

| | | | |
|---|---|---|---|
| Aluminum Sulp. com.. | 1 40 | — | 1 60 |
| Iron Free | 2 00 | — | 2 05 |
| Alum, Ammonia Lmp.. | 3¼ | — | .... |
| Potash, Lump | 2¾ | — | 3⅛ |
| Ammoniac, Sal. white gr., dom. | 4¾ | — | 5 |
| Bleach powder, per 100 lb. works | 2 00 | — | 2 50 |
| Blue Stone | 5 | — | 5¾ |
| Calcium Arsenate | 6½ | — | 7 |
| Chlorine, Liq. Cylinders | 5½ | — | 9 |
| Tanks | 3½ | — | 3¾ |
| Copperas, ton | 13 00 | —18 | 00 |
| Cream of Tartar | 25½ | — | 27 |
| Epsom Salts, 100 lb.. | 1 75 | — | 1 90 |
| Formaldehyde Spot | 9 | — | .... |
| Glauber Salts, 100 lb. | 75 | — | 1 15 |
| Glycerine (C. P.) bbls. | 16½ | — | 17 |
| Cans | 18 | — | 18½ |
| Yellow Crude | 16 | — | 16½ |
| Hydrosulphite Conc.... | 23 | — | 25 |
| Lead—Brown acetate. | 12 | — | 12½ |
| White (crystals) ... | 13 | — | 14 |
| Lime, acetate, 100 lb. | 3 50 | — | .... |
| Potassium—Bichromate | 8 | — | 8½ |
| Chlorate crystals... | 8 | — | 9 |
| Permangan, tech... | 15 | — | 15½ |
| Sodium acetate | 6 | — | .... |
| Bichromate | 6½ | — | 6¾ |
| Bisulphite, 35%.... | 1 50 | — | 1 75 |
| Nitrite | 7½ | — | 8¾ |
| Phosphate | 3¼ | — | 4 |
| Prussiate, yellow... | 11½ | — | 12 |
| Sulphide, 60% fused | 3½ | — | 3¾ |
| 30% crystals .... | 2⅝ | — | 2⅝ |
| Tartar emetic, tech.... | 29 | — | .... |
| Tin—Crystals | 38 | — | .... |
| Bichloride, 50 deg.. | 15½ | — | .... |
| Oxide, bbls. | 57 | — | .... |
| Zinc Dust | 8 | — | 10 |

### Acids

| | | | |
|---|---|---|---|
| Acetic, 28% per 100 lb. | 3 37½ | — | 3 62½ |
| Citric crystals | 44½ | — | 45½ |
| Formic, 90% | 11 | — | 12 |
| Lactic, 22% | 5¼ | — | 6½ |
| Muriatic, 18 deg. per 100 lb. in tank cars. | 95 | — | 1 00 |
| Nitric, 36@42 deg. per 100 lb. | 5 00 | — | 6 75 |
| Oxalic | 11 | — | 12¼ |
| Sulphuric, 66 deg. per ton in tank cars... | 15 50 | — | .... |
| Tartaric | 36 | — | 37 |

### Alkalies

| | | | |
|---|---|---|---|
| Ammonia, Aqua, 26 deg. | 2½ | — | 3¼ |
| Borax, Crys. bbls..... | 4 | — | 5 |
| Potash, carbonate, 80-85% | 5¾ | — | 6½ |
| Caustic, 88-92%.... | 7⅛ | — | 7½ |
| Soda Ash, 58% light.. | 1 37½ | — | 2 44 |
| Contract, 100 lb.... | 1 32½ | — | 1 57½ |
| Bicarb, per 100 lbs. | 1 90 | — | 2 25 |
| Caustic, 76% per 100 lb. | 3 75 | — | 3 90 |
| Contract, 100 lb... | 2 90 | — | .... |
| Sal. 100 lb. | 90 | — | 1 00 |

### Natural Dyes and Tannins

| | | | |
|---|---|---|---|
| Fustic: Crystals | 18 | — | 22 |
| Liquid, 51 deg. | 8 | — | 10 |
| Gambier, liquid | 10½ | — | 11 |
| Hematine, crystals ... | 14 | — | 18 |
| Hypernic Ext.—51 deg. | 11 | — | 15 |
| Indigo—Madras | 1 30 | — | .... |
| Logwood Extract, liq. 51 deg. | 7 | — | 8½ |
| Crystals | 14 | — | 18 |
| Osage Orange, Extract, 51 deg. | 7 | — | 7¼ |
| Quercitron extract, 51 deg. | 5½ | — | 6 |
| Sumac, Ext. dom., ref., 51 deg. | 5½ | — | 6½ |
| Extract, stainless .. | 10 | — | 11 |
| Tannic Acid, tech.... | 35 | — | 40 |

### Dyestuffs and Intermediaries

| | | | |
|---|---|---|---|
| Alpha Napthylamine.. | 32 | — | 34 |
| Aniline Oil | 15 | — | 16¼ |
| Salt | 24 | — | 25 |
| Beta Naphthol sublimed | 50 | — | 60 |
| Technical | 22 | — | 24 |
| Dimethylaniline | 31 | — | 32 |
| Metaphenylene Diamine | 84 | — | .... |
| Paranitraniline | 52 | — | 53 |

### Oils and Soaps

| | | | |
|---|---|---|---|
| Castor Oil, No. 3.... | 13 | — | 15 |
| Olive Oil, denatured, gal. | 1 25 | — | 1 40 |
| Foots | 10 | — | .... |
| Red Oil, lb. | 9 | — | 10½ |
| Stearic Acid double pressed | 12 | — | 12¾ |
| Turkey Red Oil, 50%. | 9 | — | 10 |

### Adhesive and Sizing Materials

| | | | |
|---|---|---|---|
| Albumen, blood domestic | 45 | — | 55 |
| Dextrine-Potato | 8 | — | 9 |
| Corn, bags 100 lb.. | 4 27 | — | 4 47 |
| Gum, British, 100 lb.. | 4 52 | — | 4 72 |
| Sago flour | 4½ | — | 5½ |
| Starch, corn, 100 lb.. | 3 47 | — | 3 67 |
| Potato | 6 | — | 7 |
| Rice | 9 | — | 9½ |
| Wheat | 6½ | — | 10 |
| Tapioca flour | 3½ | — | 5½ |

### Coal Tar Dyes

| | | | |
|---|---|---|---|
| Direct Colors— | | | |
| Black (H-acid)..... | 28 | — | 52 |
| Black Columbia FF. | 50 | — | 60 |
| Blue, 2 B. | 24 | — | 32 |
| Blue Sky, ordinary.. | 45 | — | 90 |
| Blue, 2 GL. | 1 70 | — | 2 50 |
| Blue, 4 GL. | 1 60 | — | .... |
| Blue Sky, FF. | 60 | — | 1 20 |
| Blue, Fast RL. | 1 90 | — | .... |
| Blue, Solamine | 2 00 | — | .... |
| Benzo Azurine | 90 | — | 80 |
| Brown, C. | 40 | — | 60 |
| Brown, M. | 70 | — | 90 |
| Brown, Congo G.... | 85 | — | .... |
| Brown, Congo R.... | 80 | — | .... |
| Green, B. | 60 | — | 90 |
| Green, G. | 65 | — | 90 |
| Orange, Congo | 60 | — | .... |
| Orange, Fast S. | 1 80 | — | .... |
| Red, Fast F. | 80 | — | 90 |
| Red, Congo | 40 | — | 50 |
| Benzo Purpurine, 4 B. | 40 | — | 60 |
| Benzo Purpurine, 10 B. | 1 25 | — | 1 50 |
| Scarlet, 4 BA. | 1 50 | — | .... |
| Scarlet, 4 BS. | 1 45 | — | .... |
| Scarlet, 8 BS. | 1 25 | — | .... |
| Scarlet, Diamine B.. | 1 65 | — | .... |
| Violet N. | 1 10 | — | 1 20 |
| Yellow chrysophenine | 50 | — | 1 50 |
| Yellow, Stillbene ... | 90 | — | 95 |
| Developing Colors— | | | |
| Black, BH | 40 | — | 60 |
| Black Zambesi | .... | — | 90 |
| Bordeaux, Dev. | 2 00 | — | .... |
| Orange, developed.. | 2 50 | — | .... |
| Primuline | 1 00 | — | 1 15 |
| Red, Dev. 7 BL. | 2 50 | — | .... |
| Scarlet, Dev. | 2 50 | — | .... |
| Sulphur Colors— | | | |
| Black | 20 | — | 31 |
| Blue, cadet | 90 | — | 95 |
| Blue, navy | 50 | — | 60 |
| Brown | 37 | — | 60 |
| Green | 85 | — | 1 50 |
| Green, olive | 25 | — | 50 |
| Yellow | 45 | — | 1 40 |
| Basic Colors— | | | |
| Auramine | 90 | — | 1 30 |
| Bismark Brown ... | 50 | — | 60 |
| Chrysoidine | 40 | — | 65 |
| Fuschine crystals... | 1 50 | — | 1 75 |
| Malachite green ... | 1 35 | — | .... |
| Methylene blue .... | 1 00 | — | 1 40 |
| Methyl violet ..... | 90 | — | 1 15 |
| Rhodamine B, excone | 5 00 | — | 6 00 |
| Safranine | 1 45 | — | 1 60 |
| Victoria Blue B.... | 3 10 | — | .... |
| Acid Colors— | | | |
| Naphthol blue blk.. | 47 | — | 60 |
| Napthlamine black, 4 B. | 50 | — | 55 |
| Alizarine saphirol... | 2 35 | — | 4 00 |
| Alkali blue | 3 25 | — | 3 50 |
| Indigotine | 80 | — | 1 80 |
| Induline (water soluble) | 75 | — | 80 |
| Soluble Blue | 3 00 | — | 3 75 |
| Sulphoneyanine | 1 00 | — | .... |
| Sulphone Blue R... | 60 | — | 95 |
| Patent Blue A..... | 2 50 | — | .... |
| Rescorcin brown ... | 80 | — | 90 |
| Guinea green ..... | 1 00 | — | 2 20 |
| Wool green S..... | 84 | — | 1 70 |
| Orange II | 27 | — | .... |
| Orange GG crys.... | 60 | — | .... |
| Acid Fuchsine ..... | 80 | — | 90 |
| Azo eosine G..... | 65 | — | 82 |
| Crocein scarlet .... | 1 15 | — | 1 90 |
| Fast red A..... | 50 | — | 65 |
| Azo yellow ..... | 1 35 | — | 1 40 |
| F. Light Yellow, 2 G. | 1 40 | — | .... |
| F. Light Yellow, 3 G. | 1 50 | — | .... |
| Naphthol, yellow ... | 1 35 | — | 1 40 |
| Chrome Colors— | | | |
| Alliz, Black B..... | 1 80 | — | .... |
| Diamond Black PV. | 70 | — | .... |
| Chrome Blue Black. | 45 | — | .... |
| Chrome Brown .... | 60 | — | 1 80 |
| Chrome Green ..... | 75 | — | 1 50 |
| Chrome Yellow .... | 45 | — | 1 10 |
| Indigo— | | | |
| Synthetic 20% paste | 15 | — | 17 |

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"STAR" Brand silicate has five points which make it the trusty, economical bleaching assistant that gives you the results you demand.

1—You can use "Star" Brand for all fibres or mixtures.
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ROME, N. Y.

## Dyes and Chemicals—Continued

soaping, according to the specific requirements.

Theoretically, the above should give us fast vat-dyed colors, and on warps where the washing action is physical and complete I do believe we are safe; but on closed-type machines, such as raw-stock circulating, package, or beam machines, it is well nigh impossible to get complete washing, because the stock forms a perfect filter. Therefore, where it is impossible to get a real physical action in the washing, there is only one thing left for us to do, and that is resort to a chemical action. Such chemical action, in my opinion, is afforded by the addition of a sulphuric acid sour to the wash to absolutely insure the removal or neutralization of the caustic soda employed in the dyeing. This caustice soda must be eliminated by some method before the oxidation is attempted, and where we cannot wash it out I say kill it.

In concluding, let me say that all the text books tell us vat colors will stand almost anything in the bleaching process with the exception of a caustic soda boil. Now then, how can the bleacher, no matter what process he uses, boil without caustic soda if it is present in the yarn when he receives the goods? Bleaching of colored striped fabrics is plenty hard enough even when the bleacher knows what chemicals he is using, and almost impossible if the dyer ships the bleacher fabrics containing chemicals in the colored stripes. We cannot be too careful; washing and souring cost very little. Be sure and eliminate all the caustic soda and hydrosulphite before attempting developing, and remember that old proverb, "A stitch in time gathers no moss."

## Business News

### McLeod Opens New Supply House

The Atlanta Textile Supply Co. has opened for business in a new building at 695 Glenn Street, S. W., Atlanta, Ga. This company is the fourth of a chain of textile mill supply houses operated by W. T. McLeod, Greensboro, N. C.

In October, 1919, the late H. O. Wallace and W. T. McLeod organized the Greenville (S. C.) Textile Supply Co., catering principally to the textile industry. In May, 1920, the supply department of Odell Hardware Co., Greensboro, N. C., was acquired and a new company was incorporated under the name of Odell Mill Supply Co. In November, 1924, H. O. Wallace sold his interest and retired from the company. In June, 1925, the Spartanburg (S. C.) Mill Supply Co. was organized and now comes the new supply house in Atlanta.

W. T. McLeod, who is president and active head of these mill supply companies, is also president and principal owner of the McLeod Leather & Belting Co., Greensboro, N. C. This company operates a large leather belting factory and distributes its product through the jobber exclusively.

In a recent interview, Mr. McLeod stated that the four supply houses would enable his company to serve the entire southern textile district and no further expansion was planned at this time. He also stated that all four houses would standardize on the very best lines obtainable, making interchange of stocks possible and offering the manufacturer complete distribution in the southern States, without the necessity of heavy selling costs. Each of the McLeod companies is separately incorporated under the laws of the State in which they are located, thereby actually becoming a part of the community which they serve.

Associated with Mr. McLeod as managers are: R. W. Wallace, Odell Mill Supply Co.; Karl A. Fisher, Spartanburg Mill Supply Co.; D. R. Dickson, Greenville Textile Supply Co.; and R. B. Dorman, Atlanta Textile Supply Co.

### New Linde District Office

The Linde Air Products Co. has opened a new district sales office at 48 West McLemore Ave., Memphis, Tenn. Other Linde district offices are maintained in 25 industrial centers. Users of Linde oxygen, Oxweld welding and cutting equipment and supplies, Prest-O-Lite acetylene and Union carbide in the district which consists of Western Tennessee, Northern Mississippi and Eastern Arkansas, will find this office prepared to handle their needs. H. N. Smith will be district manager in charge.

### E. D. Jefferson Resumes Full Control of Kier Business

E. D. Jefferson, sole inventor and manufacturer of the Jefferson kier, Boston, Mass., announces that the business arrangement between him and D. R. Weedon has been dissolved, and that the firm name of Jefferson-Weedon has been changed back, as of May 1, to E. D. Jefferson, the latter assuming full control of the business and taking over all accounts and assuming all obligations. Mr. Weedon continues with Mr. Jefferson covering New England States and New York State.

### Peerless Machine Co. Changes

Announcement is made that Harry S. Fisher has recently purchased the stock of the Peerless Machine Co., Inc., Coral & E. Hagert Sts., Philadelphia, formerly owned by Richard T. Bauer, E. W. Knapp, and John Hauck. Mr. Fisher, who was formerly field engineer for this company, was elected president of the company at a meeting of the board of directors held May 12. John Bauer was elected secretary and treasurer.

### Boston Gear Works Build Plant Addition

The Boston Gear Works, Inc., of Norfolk Downs, Mass., manufacturers of standardized gears, speed reducers and power transmission equipment, have erected a three-story addition to their plant at Norfolk Downs.

The new building is 67 ft. by 95 ft. The general design of the structure is in conformity with the other sections of the company's plant. The walls are


DISODIUM PHOSPHATE

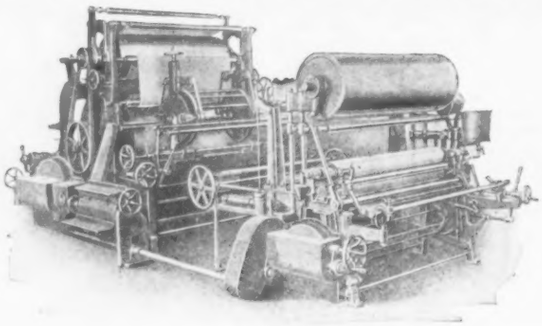
GENERAL CHEMICAL COMPANY

NOT the least of the advantages in using this Company's Disodium Phosphate is that of having it arrive clean and uncontaminated—thanks to our use of only A-1 barrels with special paper liners.

GENERAL CHEMICAL COMPANY
40 RECTOR ST., NEW YORK
Cable Address Lycurgus, N.Y.
BUFFALO · CHICAGO · CLEVELAND · DENVER · LOS ANGELES
PHILADELPHIA · PITTSBURGH · PROVIDENCE · SAN FRANCISCO · ST LOUIS
THE NICHOLS CHEMICAL COMPANY, LIMITED, MONTREAL

EMAROL
WILL OPEN YOUR EYES
As a felt inducer — it's a caution:
Any cloth with felting qualities, and many with but little take very kindly to
EMAROL
They absorb it quickly and are well rewarded, for it stays with them to the end of the run.
The consensus of opinion is always in its favor BECAUSE the felt is more dense, the cloth is stronger, the handle mellower and WRINKLES are nil.
TRY IT ON THOSE GOODS THAT ARE GIVING YOU TROUBLE
*Sample of Emarol and literature sent on request.*
ERNST BISCHOFF COMPANY
INCORPORATED
NEW YORK, N.Y.

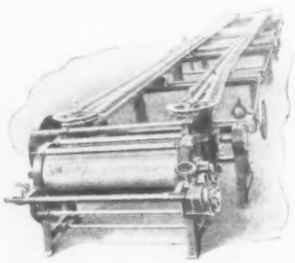
*Perfection is a superlative term but these machines approach it very closely*



**PALMER**

No finishing plant is complete without a Palmer

It is a simple fact that the **Morrison Palmer** is the most correctly designed, beautifully synchronized and the most economical ever offered the American trade.



AUTOMATIC TENTER

## A LATE REVIVAL

OF AN OLD METHOD

(tested and tried for many years)

in developing a demand for a combination of quetch, tenter and palmer in one unit, with its obvious economy of time, space, labor and initial investment.

The acknowledged superiority of the Morrison Palmer Tenter & Quetch will immediately indicate the unusual efficiency of uniting these three machines in one continuous range.

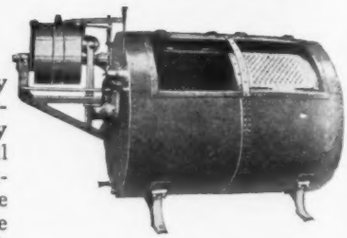
Their presence will lift any plant out of Mediocrity into Distinction.

**MORRISON MACHINE CO**

PATERSON, N. J.

# Rotary or Paddle

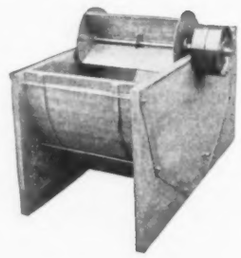
*— which do you prefer?*



For years of safe, speedy dyeing, select the newly-designed Rome Monel Rotary ...The perforations of its shell are embossed to prevent roughing the hosiery...And there are spring latches to lock the sliding doors open—or closed.

Or perhaps it's the paddle type that would better fill your needs. The monel metal vat and paddle insure true, even colors. Especially suitable for small batches. Made with frame of steel angle or selected cypress...

For Sulphur dyes, use the ROME STEEL ROTARY. Full details—gladly and promptly. Write us.



ROME MACHINE & FOUNDRY CO.

*Rome, Ga.*

# ROME

# AMICO

SINCE 1882

THE ORIGINAL UNDERSLUNG LARGE EXTRACTOR

(U. S. Patents Pending)

### Extraction Is an Asset in Your Mill

AMICO Oscillating Centrifugal Extractors will turn mill liabilities into assets so far as extraction is concerned.

In thoroughness of extraction — saving time, trouble and labor in further drying.

In economy of operation —faster production, less labor and attention needed, low power costs. One 48" AMICO instead of three 30" old style machines is a frequent occurrence!

In safety to operators, AMICOS are truly foolproof. One lever control starting and stopping, positive safety system.

Another liability turned into an asset.

Better get full details. On request—gladly.

**ARMAND MAY...INC.**

ATLANTA

AMICO

NEW YORK: 55 W. 42nd St.
CHICAGO: 360 N. Michigan Ave.

A 5 H.P. Standard Motor Starts a 48" Amico Extractor!

# ZAREMBA

HORIZONTAL TUBE

# EVAPORATORS

ARE AN INTEGRAL PART

OF

**Zaremba Caustic Soda Recovery Plants**

AND ARE

**Built for Long Life—**

**Hard Work—**

**No Worry to the Owner**

Zaremba systems for caustic soda recovery—installed in mercerizing plants—are demonstrating consistently that a yearly return ranging from 40 to 60 per cent is readily possible with Zaremba type of apparatus.

*See also* CONSOLIDATED TEXTILE CATALOG

ZAREMBA COMPANY

506 Crosby Bldg. Buffalo, N. Y.

New York City Office: 95 Liberty St.

of brick and concrete and the floors of heavy construction supported by heavy lumber and steel girders. About 40 tons of steel and four carloads of lumber have been used in the construction of this new addition. Ample lighting facilities are provided as well as the most modern arrangements for heating. Unit heaters from which warm air can be blown to all parts of the building are provided.

A special feature of the new structure is the spacious recreation hall which is located on the third story. Facilities for giving motion picture exhibitions, holding dances and other activities have been provided. In addition to this, lectures and other features of an educational nature are carried on for the benefit of the company's employes. A section of the hall is devoted to a reading room, well stocked with suitable magazines, and to games.

## Appointed Engineer of Foreign Department

Announcement is made of the appointment of Hans J. Meyer as an engineer of the foreign department of the International Combustion Engineering Corp. Mr. Meyer will sail on June 6 for the Far East.

Mr. Meyer has had extensive experience as an engineer and executive. His early training was with the Milwaukee Electric Railway & Light Co. His later identifications were as follows: District engineer, Allis Chalmers Co.; sales engineer, Westinghouse Electric & Mfg. Co.; superintendent, Shreveport Gas, Electric Light & Power Co., Shreveport, La.; partner in the consulting engineering firm of Vaughn, Meyer & Sweet, Milwaukee; and partner with Charles L. Pillsbury and F. A. Vaughn in the consulting engineering firm of Charles L. Pillsbury Co., Minneapolis and St. Paul.

During the war he was appointed administrative engineer, U. S. Fuel Administration, Bureau of Conservation.

Mr. Meyer became identified with the Combustion Engineering Corp. in 1926 and was placed in charge of design and construction of complete fuel burning and steam generating equipment for the Kip's Bay Station of the New York Steam Corp.

## Two Firms Combined in Lyon Metal Products, Inc.

Lyon Metal Products, Inc., has been formed at Aurora, Ill., and has purchased the Durand Steel Locker Co., Chicago Heights, Ill., and the Lyon Metallic Mfg. Co., Aurora, Ill. The former company manufactures steel lockers, racks, bins, etc., while the latter produces steel shelving, lockers, boxes, cabinets and general steel equipment. The new company will continue the manufacture of these lines and will also develop new products. The major plants and new units will be in Aurora, Ill., and Chicago Heights, Ill., with additional assembly plants on both coasts—at Jersey City, N. J., and Los Angeles, Cal.

The men who brought the original companies to their present position of national standing will direct the new and larger corporation. The personnel of Lyon Metal Products, Inc., will be as follows: President, F. S. Waters, who was president and one of the founders of the Lyon company; chairman of the board, H. A. Gardner, for many years secretary of the Durand company; vice-president, Keith Spalding, who was president and founder of the Durand company; vice-president, Walter N. Vance, formerly vice-president of the Durand company; vice-president, C. E. Gerberich, formerly vice-president of the Lyon company; secretary, B. L. Waters, who was treasurer and one of the founders of the Lyon company; assistant secretary, Henry A. Struck, formerly sales manager for Durand; treasurer, W. B. Brown, who has been vice-president, general manager and treasurer of the Durand company; assistant treasurer, A. W. Lauder, who has been advertising director and assistant general manager of the Lyon company; directors, J. E. Bales, J. B. O'Connor and R. T. Waters, all of whom have been active in the Lyon organization.

It is felt that, with enlarged manufacturing facilities, it will be possible to work out production methods and specialized processes on a basis even more advantageous than those which brought success to the former companies.

## Allis-Chalmers Moves Grand Rapids Office

The Grand Rapids (Mich.) branch office of Allis-Chalmers Mfg. Co. has been moved to 310 Building and Loan Building. This office is in charge of G. C. Culver and is a branch of the Detroit office.

## New Publications

**Books reviewed in this column may be obtained from the Bragdon, Lord & Nagle Co., 334 Fourth Ave., New York City.**

AN ENCYCLOPAEDIA OF TEXTILES; with Introduction by Ernst Flemming; published by E. Weyhe, New York. Price $15.

This beautifully prepared book, devoted largely to excellent reproductions of textile designs dating from the earliest times to the beginning of the nineteenth century, is an important addition to the literature on textile development. The introduction traces the subject through the following stages: Weaving and Tapestry-Weaving in Ancient Times; Late Antique Fabrics; Medieval Silk Fabrics, Eighth to Thirteenth Centuries; Silk Weaving in the Late Middle Ages. Thirteenth to Fifteenth Centuries; Woven Fabrics of the Sixteenth, Seventeenth and Eighteenth Centuries; Oriental Fabrics Since 1500. Following the introduction there are 320 pages of plates.

Mr. Flemming's treatment of the subject indicates the result of prolonged and careful research.

ARTIFICIAL SILK HANDBOOK, compiled by The Silk Journal, 140 pages. Illustrated. John Heywood, Ltd., Manchester, England. Bragdon, Lord & Nagle Co., New York, agents for U. S. and Canada. Price $1.50.

This is the third edition of a useful English publication which gives statistical and technical information on the manufacture and utilization of rayon. Brief outlines are given of the history of artificial silk, processes of manufacturing by the different systems, and the manipulation of rayon in winding, weaving, knitting, etc. There are also sections on conditioning, dyeing, drying, printing, and other finishing operations. Considerable space is given to equivalent counts of rayon and other textile yarns, with tables and formulas of practical value to the mill man who is making rayon combinations. Much of the matter in an annual handbook of this sort is necessarily reprinted from earlier editions, but all statistical and technical matter has been thoroughly revised and brought up to date.

BOMBAY INDUSTRIES: THE COTTON MILLS, edited by S. M. Rutnagur, J. P., M. R. S. A. (Lond.), published by The Indian Textile Journal Ltd., Military Square, Fort, Bombay, India.

Of the 334 cotton mills in India, operating 8,713,000 spindles and 159,500 looms, approximately 40 per cent of the spindleage and 46 per cent of the looms are located in Bombay, which city has a population of 1,200,000. Mr. Rutnagur's book of approximately 750 pp. provides very complete particulars of the cotton mills and allied trades of what is known as the "town and island of Bombay," and provides a very accurate picture of cotton manufacturing conditions in that country. While no attempt is made to provide a connected historical narrative of the development of cotton manufacturing in Bombay, nevertheless there will be found in its various sections historical data from the inception of the industry in 1850 to the present time. In addition to providing a complete directory of cotton mills in the Bombay district, their officials, directors, equipment, products, and financial position, very complete statistics are also given for the whole Indian cotton industry and also for India and Japan. The work is profusely illustrated with pictures of mills, mill officials and operatives. Its value as a work of reference is enhanced by its very complete table of contents and alphabetical index.

A COMPREHENSIVE SURVEY OF STARCH CHEMISTRY, VOL. I; compiled and edited by Robert P. Walton in collaboration with a staff of authorities. 600 pages. Illustrated. Published by The Chemical Catalog Co., Inc., New York. $10.

Part I of this volume is composed of a symposium which presents the various phases of starch chemistry and technology. Among the authorities contributing to this symposium are Walter A. Nivling, who discusses the significance of starch viscosity in the manufacture of paper and textiles; Frederick Denny Farrow, who takes up the use of starch in the textile industry, particularly for the sizing of warps; H. C. Gore, H. G. Turley, Leo Wallerstein, and Jokichi Takamine, Jr., who have prepared a section on starch-converting enzymes used in the textile industries; Jerome Alexander, who discusses starch and flour adhesives; and Victor G. Bloede, who discusses the manufacture of dextrin, gums, and modified starches.

Part II is a bibliography of periodical literature dealing with starches and related products. The book provides the researcher with an encyclopedia of previous observations and furnishes a readily available exposition of the subject. A corresponding survey of patent literature is planned to appear as Vol. 2 of this series.

## Arizona Wool Growers Move Headquarters

PHOENIX, ARIZ.—The Arizona Wool Growers Association will move its headquarters from Phoenix to Flagstaff on June 1, and remain there until fall.

The annual business meeting will be held in July.

## Useful Catalogs

**Steam.** A new booklet entitled Elesco service in connection with the efficient generation and use of steam, and utilization of waste heat, is being sent out by The Superheater Co., New York. There are 16 pages, each of which takes up a different phase of the service and products of the Elesco organization. Impressive lists of industrial concerns and public utility companies that have come to The Superheated Co. for cooperation are given. Features of the Elesco superheater are explained and types of boilers that have been equipped are also given.

**Tentacular Belting.** A 16-page booklet has been issued by Alexander Bros., Inc., Philadelphia, to acquaint textile executives and engineers with the merits of Tentacular. This product is a power transmission belt having a very high adhesion on pulleys which increases efficiency by eliminating power losses due to slip and friction. The construction of the belting is described as follows: Tentacular consists of a backing, made of either oak tanned leather or balata, to the under surface of which are attached narrow longitudinal strips of soft green leather, made by a special process and having extremely high coefficient of friction. These strips are held in position by means of special hollow brass rivets, strongly clinched, and forming a depression or hemispherical pocket on the friction or pulley side of the belt. These pockets remind one very much of the tentacles of the octopus or devil-fish, whence the name "Tentacular."

**Electric Liquid Filters** and pumps are discussed in a new pamphlet issued by Alsop Engineering Co., New York, manufacturers of "Hy-Speed" machines. All concerns that carry on liquid processes will be interested in the line of equipment described which includes internal pressure filter, double pressure filter, tanks, etc. Sections are devoted to the "Push-Pull" portable mixer and to glass coated tanks.

**Electric Hoists** are discussed in material handling booklet No. 31, which is being sent out by The Chisholm-Moore Mfg. Co., Cleveland, O. The simple construction of C-M hoists is brought out in text and illustrations. Various sections are devoted to specifications for hoists and motor-driven trolleys, views of uses in numerous industries, particulars of special hoists, wiring materials, clearance dimensions, part numbers and general instructions, and other C-M material handling equipment. Particular attention is called to the company's free service in studying material handling needs and to the ability to supply equipment that will meet any conditions.

**Air Preheater.** The design of the C-E air preheater has changed materially since the last catalog was issued, and these changes in design are covered fully both in the text and illustrations of this new edition, issued by the Combustion Engineering Corp., New York. The practice of preheating air for combustion has been extended rapidly in the last five years, and there is a very widespread interest in this subject. Judging from present trends, practically all of the new power stations of any size will use preheated air, and many existing plants have installed preheaters.

## Botany Adds Fancy Broadcloths to Line for Fall

The Botany Worsted Mills have brought out several new fancy broadcloth weaves in the fall women's goods collection opened recently. Four special constructions are featured, including cord, wide-wale, three-stripe diagonal and all-over chevron self-tone effects.

There are 11 broadcloth numbers in all, ranging in price from the standard No. 315 at $2.50 to the fancy weaves at $3.75, all terms being 6-10-60, and the widths full 54 or 56 inches. The weights range from 10 ozs. for early fall to 15 and 16 ozs. for cold weather wear.

The broadcloth color card for fall contains 40 different shades, stressing particularly the beige-tans, medium to dark blues, medium browns, grays, greens, russets and gray, and of course black, which is expected to lead the procession. They have added about 15 new shades.

"Newzealia," Botany's leading suede coating, opens at $2.87½ a yd., or 12½c higher than the last list.

The following is Botany's price list for the new fall-winter season:

| Broadcloths—Style | Fall, 1928 |
|---|---|
| 315, 10 oz., plain weave | $2 50 |
| Modena, 13¾ oz., plain weave | 2 87½ |
| Coruma, 16 oz., ripple finish | 2 95 |
| Norita, 11¾ oz., luster twill | 3 65 |
| Constanza, 14 oz., luster twill | 3 37½ |
| Minerva, 16 oz., wide wale | 3 50 |
| Finessa, 16 oz., corded effect | 3 57½ |
| Velldo, 14¾ oz., three-stripe diagonal | 3 75 |
| Chevrona, 14½ oz., all-over chevron | 3 75 |
| Luxurious, 11¾ oz., fine twill | 4 87½ |
| Rovuna, 15 oz., rayon-fleck (oxford effect) | 5 12½ |
| Suedes— | |
| Lindia, 10¾ oz., standard suede | 2 50 |
| Newzealia, 17 oz., standard suede | 2 87½ |
| Delmara, 12 oz., fine cashmere suede | 3 25 |
| Arlina, 14½ oz., corded diagonal | 3 50 |
| Lindiana, 10 oz., fine quality suede | 3 87½ |
| Kasha effects— | |
| 6656, 6¼ oz., dress weight | 1 57½ |
| 6574, 6½ oz., dress weight | 1 85 |
| 6657, 8¼ oz., dress weight | 2 25 |
| 6618, 8 oz., dress weight | 2 37½ |
| 6283, 7¾ oz., dress weight | 2 87½ |
| Orissa, 13½ oz., broadcloth fin. coating | 3 25 |
| Patrice, 6¾ oz., ombre diagonal | 3 25 |
| Basket weaves— | |
| Sylvette, 12 oz., two-tone rayon fancy | 2 50 |
| Baskella, 11 oz., piece dye fancy | 2 87½ |
| Chanara, 14½ oz., piece dye fancy | 2 87½ |
| Baskara, 16½ oz., suede-finished | 4 25 |
| Ancora mixtures— | |
| Zeitzella, 6¼ oz., oxford-effect dress weight | 4 50 |
| Zeitzette, 5½ oz., kasha effect | 4 57½ |
| Zeitzar, 8½ oz., flannel-finish | 4 87½ |
| Zeitzeen, 7½ oz., kasha effect | 5 25 |
| 6612, 12 oz., basket weave coating | 7 25 |
| Other coatings— | |
| 6668, 14½ oz., fine cheviot | 2 87½ |
| Chinita, 17 oz., new modified chinchilla | 3 37½ |
| Dress and suit fancies— | |
| Stratmore, 7½ oz., tweed effect | 2 25 |
| 6640, 8¾ oz., bird's eye pattern | 2 62½ |
| 6666, 9 oz., two-tone check | 2 25 |
| 6654, 7¾ oz., small check motif | 2 25 |
| Sutara, 8½ oz., tweed-check effect | 2 37½ |
| (Above also available with fancy selvage borders for combination garments.) | |
| 6669, 5 oz., tweed check | 1 65 |
| 6639, 8 oz., corded stripe weave | 2 50 |
| 6670, 4¾ oz., novelty tweed | 1 50 |
| Metaltone, 8½ oz., rayon basket weave | 2 37½ |
| 6651, 6 oz., twill kasha, bayadere stripe chevron borders | 2 25 |
| Chandar, 4¼ oz., linen-kasha effect | 2 25 |
| Merano, 6½ oz., silky cashmere | 2 57½ |
| Chiffonette, 8 oz., chiffon broadcloth dress fabric (a noteworthy fabric) | 2 75 |
| Brasilian, 6 oz., standard botany flannel | 1 50-157½ |
| Knit, 7½ oz., fine worsted flannel | 1 75-1 87½ |
| Gladess, 7½ oz., basket weave crepe | 2 25 |
| Danise-Crepe, 6¾ oz., sheer basket weave | 1 87½ |
| Baskeen, 6 oz., basket-oxford effect | 1 87½ |
| Persiette, 7½ oz., basket weave novelty | 1 75 |
| Persiana, 9¼ oz., basket weave fancy | 2 50 |
| Botany Crepe, 7 oz., standard crepe weave | 1 85 |
| Travessa, 7½ oz., small check crepe | 2 85 |
| Sabine, 5 oz., fancy weave crepe | 1 75 |
| Sabette, 5 oz., fancy weave crepe | 1 75 |
| Mercie-Crepe, 6 oz., fine crepe weave | 1 95 |
| Georgiana, 8¼ oz., fine georgette-crepe | 2 25 |
| 6653, 8 oz., plain oxford weave | 2 75 |
| 6541, 9½ oz., plain oxford weave | 2 75 |
| 6542, 9½ oz., rayon-stripe compose | 2 87½ |
| 6555, 8¾ oz., vigoureux oxford | 2 87½ |
| Lynette 4 oz., linen-kasha effect | 2 87½ |
| 6544, 4¼ oz., self-stripe fancy | 1 37½ |
| Bloomsbury, 7 oz., covert rep | 2 75 |
| 6659, 6¼ oz., three-tone rayon plain | 2 25 |
| Fantasia, 7¾ oz., fancy twill-check covert | 2 95 |
| 6571, 9½ oz., mannish pattern tweed | 2 50 |
| Pinado, 5 oz., rayon stripe-oxford rep | 1 75 |
| Benello, 6½ oz., fancy nubbed-rep | 1 87½ |
| 6665, 7¼ oz., mixture stripe on rep | 1 95 |

# Obituary

### Theodore H. Lamprecht

Theodore H. Lamprecht, aged 69 years, former president of the Garfield Worsted Mills and of the sales agency of Graupner, Love & Lamprecht, of New York, died in Cannes, France, last week. Mr. Lamprecht, who retired after resigning from these firms nine years ago, was on a tour of the world when taken ill. He was a salesman for the Botany Worsted Mills, of Passaic, when he became financially interested in the firm of Graupner, Love & McCabe, purchasing the latter's interest. He also procured stock of the Garfield Worsted Mills and became its vice-president. Later he became president of the mill and also president of the sales agency. He is survived by his widow, who is bringing the body back to America.

### William J. Shepard

William J. Shepard, for many years identified with the glove industry of Fulton county, died last week at his home in Johnstown, N. Y., after a brief illness. For several years he was superintendent of the plant of R. M. Evans & Sons and during the world war he was appointed a glove inspector in Fulton county. For the last ten years he has held the position as sales manager of the Littauer Glove Corp., besides being affiliated with the Tryon Glove Co. His widow and one daughter survive.

### Louis L. Beford

Louis L. Beford, for the last eight years overseer of spinning for the Worcester (Mass.) Woolen Mill Co., died at his home in that city on May 13 of pneumonia and heart trouble after a short illness. He was the youngest overseer in the mill, where he learned the business, having been a spinner, second hand and overseer. Mr. Beford was 36 years old and a native of Spencer, Mass. He leaves a widow, three daughters and two sons.

### Franklin P. Toof

Franklin P. Toof, aged 71, secretary and general manager of the Cohankus Mfg. Co., Paducah, Ky., died at his home in that city, April 30, after a short illness. Mr. Toof went to Paducah from New Jersey in 1897 and established the Cohankus plant, of which he was the active head. Mr. Toof was a director in the First National Bank of Paducah, and of the Paducah Hosiery Mills.

### William E. Duncan

William E. Duncan, assistant superintendent of the Agawam (Mass.) Co., died suddenly in the Westerly (R. I.) Hospital on May 7, to which town he had gone to pass the week end. He was 59 years old and had been connected with the company for 26 years. The mill was closed the afternoon of the funeral on May 10 as a mark of respect.

### John Borgeson

John Borgeson, overseer of weaving in a Plymouth, Mass., woolen mill, died in the Plymouth Hospital on April 30, aged 46 years. He was a native of Monson, Mass., where his father now lives. He leaves a widow, one daughter and two sons. Burial was in Ware, Mass.

## Financial Quotations

(Continued from page 65)

| | | |
|---|---|---|
| N. B. Cotton Mills, com. | 113 | ... |
| N. B. Cotton Mills, pfd. | ... | 85 |
| Neild Mill | 120 | ... |
| Nonquitt Spn. Co. | 18 | 20 |
| Pemaquid Mills | 11 | ... |
| Pierce Mill | 340 | 355 |
| Potomska Mills | 35 | ... |
| Quissett Mills Co., com. | 80 | 90 |
| Quissett Mills Co., pfd. | 95 | 98 |
| Sharp Mfg. Co., pfd. | 5½ | ... |
| Soule Mill | ... | 137½ |
| Taber Mill | ... | 72½ |
| Wamsutta Mills | ... | 46½ |
| Whitman Mills | ... | 30 |

## Fall River Mills Stocks

(Quotations furnished by G. M. Haffords & Co.)

| | Bid | Asked |
|---|---|---|
| Algonquin Printing Co. | 320 | ... |
| American Linen Co. | ... | ... |
| Arkwright Mills | ... | 15 |
| Barnard Mfg. Co. | ... | 30 |
| Borden Mfg. Co., Richard. | 10 | ... |
| Border City Mfg. Co. | 15 | 20 |
| Bourne Mills Co. | ... | 60 |
| Chase Mills | 2 | ... |
| Charlton Mills | ... | 101 |
| Cornell Mills | ... | 55 |
| Davis Mills | ... | 47 |
| Davol Mills | 12 | ... |
| Flint Mills | 52 | ... |
| Granite Mills new (com.) | 15 | ... |
| King Philip Mills | 135 | ... |
| Laurel Lake Mills (com.) | 5 | 10 |
| Laurel Lake Mills (pfd.) | ... | ... |
| Lincoln Mfg. Co. | ... | 48 |
| Luther Mfg. Co. | ... | 112 |
| Merchants Mfg. Co. | 25 | ... |
| Narragansett Mills | ... | 35 |
| Osborn Mills (new) | 75c | ... |
| Parker Mills (com.) | 4 | ... |
| Parker Mills (pfd.) | 22 | ... |
| Pilgrim Mills | ... | 135 |
| Sagamore Mfg. Co. | ... | 103 |
| Shove Mills | 10 | 15 |
| Stafford Mills | ... | 10 |
| Stevens Mfg. Co. | ... | 97 |
| Troy C. & W. Mfg. | ... | ... |
| Union Cotton Mfg. Co. | ... | 60 |
| Wampanoag Mills | 10 | 20 |
| Weetamoe Mills | ... | 7 |

## Southern Mill Stocks

Quotations by A. M. Law & Co., Inc., Spartanburg, S. C.

| | Bid | Asked |
|---|---|---|
| Abbeville Cotton Mills | 79 | 85 |
| Anderson Cotton Mills | 115 | 118 |
| Arcade Cotton Mills | 79 | 85 |
| Arcadia Mills | 260 | ... |
| Arcadia Mills, pfd | 102 | ... |
| Arkwright Mills | 100 | ... |
| Augusta Factory, Ga. | 24 | 30 |
| Avondale Mills, Ala. | 1160 | 1200 |
| Beaumont Mfg. Co. | 300 | ... |
| Beaumont Mfg. Co., 7% pfd. | 102 | ... |
| Belton Mills | 39 | 43 |
| Belton Mills, pfd. | 96 | 98 |
| Bibb Mfg. Co. | 135 | 140 |
| Bibb Mfg. Co., 6%, pfd. | 100 | 103 |
| Calhoun Mills | 138 | ... |
| Cannon Mfg. Co. (Par, $10) | 23 | 25 |
| Chadwick-Hoskins Co. (Par, $25) | 15 | 18 |
| Chesnee Mills | 130 | 135 |
| Chiquola Mfg. Co. | 275 | 285 |
| Chiquola Mfg. Co., pfd | 102 | ... |
| Clifton Mfg. Co. | 140 | 145 |
| Clinton Cotton Mills | 300 | ... |
| Columbus Mfg. Co., Ga. | 121 | 127 |
| Cowpens Mills | ... | 77 |
| D. E. Converse Co. | 120 | 125 |
| Dallas Mfg. Co., Ala. | ... | 125 |
| Darlington Mfg. Co. | 70 | 80 |
| Drayton Mills | 105 | ... |
| Dunean Mills | 123 | 126 |
| Dunean Mills, pfd. | 101 | 103 |
| Eagle & Phenix Mills, Ga. | 74 | 85 |
| Easley Cotton Mills, pfd. | 96 | 99 |
| Enterprise Mfg. Co., Ga. | 115 | 135 |
| Florence Mills | ... | 93 |
| Florence Mills, pfd. | 103 | ... |
| Gaffney Mfg. Co. | 63 | 70 |
| Gainesville Cotton Mills, Ga. | 180 | 187 |
| Glenwood Mills | 130 | 135 |
| Gluck Mills | 75 | 80 |
| Gossett Mills | 85 | 95 |
| Graniteville Mfg. Co. | 120 | 130 |
| Greenwood Cotton Mills | 400 | ... |
| Grendel Mills | 250 | ... |
| Grendel Mills, pfd. (Par, $50) | 49 | 51 |
| Hamrick Mills | 125 | 130 |
| Hartsville Cotton Mills | 143 | 147 |
| Inman Mills | 130 | ... |
| Inman Mills, pfd. | 103 | ... |
| Jackson Mills | 300 | ... |
| Judson Mills, A pfd. | 104 | 106 |
| Judson Mills, B pfd. | 101 | 103 |
| King, John P. Mfg. Co., Ga. | 110 | ... |
| Lancaster Cotton Mills | 270 | ... |
| Laurens Cotton Mills | 145 | ... |
| Limestone Cotton Mills | 124 | 128 |
| Marion Mfg. Co., N. C. | 137 | ... |
| Marlboro Mills | 24 | 28 |
| Mills Mill | 102 | ... |
| Mollohon Mfg. Co., pfd. | 98 | 100 |
| Monarch Mills | 143 | 147 |
| Musgrove Cotton Mills | 80 | 85 |
| Newberry Cotton Mills | 129 | 132 |
| Ninety-Six Mills | 200 | ... |
| Norris Cotton Mills | ... | 70 |
| Orr Cotton Mills | 99 | 102 |
| Orr Cotton Mills, pfd. | 102 | 104 |
| Pacolet Mfg. Co. | 214 | ... |
| Pacolet Mfg. Co., pfd. | 104 | ... |
| Panola Cotton Mills, Class A, pfd. (Par, $80) | 74 | 77 |
| Pelham Mills | 10 | 13 |
| Pickens Cotton Mills | 130 | ... |
| Piedmont Mfg. Co. | 142 | 146 |
| Poe, F. W., Mfg. Co. | 76 | 78 |
| Riverside and Dan River Mills | 169 | 173 |
| Riverside and Dan River Mills, 6% pfd. | 101 | 104 |
| Saxon Mills | 90 | 95 |
| Sibley Mfg. Co., Ga. | 55 | 60 |
| Spartan Mills | 160 | ... |
| Union-Buffalo Mills | 50 | 55 |
| Union-Buffalo Mills, 1st pfd. | 99 | 101 |
| Union-Buffalo Mills, 2nd pfd. | 59 | 61 |
| Victor-Monaghan Company. | 101 | 103 |
| Victor-Monaghan Company, pfd. | 114 | ... |
| Wallace Mfg. Co. | 107 | 112 |
| Wallace Mfg. Co., pfd. | 102 | ... |
| Ware Shoals Mfg. Co. | 150 | ... |
| Watts Mills | 40 | 50 |
| Watts Mills, 1st pfd. | 100 | ... |
| Whitney Mfg. Co. | 45 | 50 |
| Woodside Cotton Mills Co. | 120 | 125 |
| Woodside Cotton Mills Co., pfd. | 94 | 96 |

## N. Carolina Textile Stocks

(Taken from list of Southern Mill Stocks quoted by R. S. Dickson & Co., Gastonia, N. C.)

| | Bid | Asked |
|---|---|---|
| Acme Spinning Co. | 112 | 116 |
| Am. Yarn & Processing Co. | 105 | 110 |
| Arlington Cotton Mills | ... | 90 |
| Arrow Mills | ... | 87 |
| Cabarrus Cotton Mills | 130 | 135 |
| Cabarrus Cotton Mills, 7% pfd. | 109½ | ... |
| Cannon Mfg. Co. (par $10) | 24 | 26 |
| Chadwick-Hoskins Co. (par $25) | 12 | 14 |
| Chadwick-Hoskins Co., 8% pfd. | 103 | 105 |
| China Grove Cotton Mills | 118 | 121 |
| Clara Mfg. Co. | 92 | 100 |
| Climax Spinning Co. | 107 | 110 |
| Clover Mills | ... | 64 |
| Crescent Spinning Co. | 100 | 105 |
| Dixon Mills | 104 | 110 |
| Durham Hosiery, 7% pfd. | 43 | 49 |
| Durham Hosiery "B" | 5 | 7 |
| Eastern Mfg. Co. | ... | 55 |
| Erwin Cotton Mills Co. | 116 | ... |
| Erwin Cotton Mills Co., 6% pfd. | 104 | 106 |
| Gibson Mfg. Co. | 135 | ... |
| Globe Yarn Mills (N. C.) | 52 | ... |
| Gray Mfg. Co. | ... | 84 |
| Hanes, P. H. Knitting Co. | 15 | 18 |
| Hanes, P. H. Ktg. Co., 7% pfd. | 102½ | ... |
| Henrietta, 7% pfd. | 80 | 90 |
| Imperial Yarn Mills | ... | 90 |
| Jennings Cotton Mills | 200 | 215 |
| Linford Mills | 111 | 115 |
| Locke Cotton Mills Co. | 110 | 119 |
| Lola Mfg. Co. | ... | 55 |
| Majestic Mfg. Co. | 165 | 180 |
| Mansfield Mills | 114 | 125 |
| Mooresville Cotton Mills | ... | 29 |
| Moorseville Cotton Mills 7% prior pfd. | 93 | 98 |
| Myers Mill | 94 | ... |
| National Yarn Mill | 95 | 100 |
| Parkdale Mills | ... | 85 |
| Perfection Spinning Co. | 102 | 106 |
| Ranlo Mfg. Co. | 135 | 150 |
| Rhyne-Houser Mfg. Co. | 100 | 105 |
| Roanoke Mills, 7½% 1st pfd. | 95 | 99 |
| Roanoke Mills, 8% 2nd pfd. | 94 | 99 |
| Rosemary, 7½% pfd. | 98 | ... |
| Rowan Cotton Mills Co. | 90 | 96 |
| Seminole Cotton Mills Co. | 89 | 100 |
| Sterling Spinning Co. | 104 | 111 |
| Stowe Spinning Co. | 109 | 115 |
| Victory Yarn Mills Co. | 63 | 68 |
| Wiscasset Mills Co. | 200 | ... |
| Winget Yarn Mills Co. | 62 | 70 |

## Threatened Break at Table Rock Reservoir Passes

PIEDMONT, S. C.—The Piedmont Mfg. Co.'s plant here, which shut down because of danger from the threatened break of the Table Rock Reservoir, resumed operations last week.

This was the only textile plant which was forced to shut down because of the possible disaster that threatened the valley plants.

Pelzer and Ware Shoals mills are running as usual, it was reported. The Slater Mill at Marietta and the Renfrew Mill, at Travelers Rest, will not be inconvenienced by the draining of the dam as water is being supplied them from Greenville's Paris Mountain Reservoir, which also furnishes water for the city of Greenville.